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BACKGROUND

OVER THREE DECADES OF CLINICAL EXPERIENCE

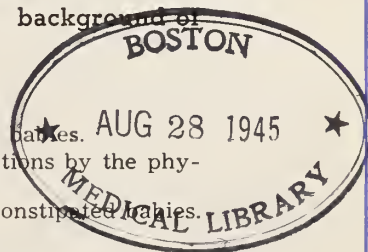
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THE JOURNAL

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July 1945

No. 1

BREAST FEEDING

RUTH R. BERREY, M. D.
Birmingham, Alabama

Breast feeding will always play a leading role in problems confronting pediatricians due to its prime importance and the necessity of instilling its value in the young mothers of each generation. It requires constant work on the part of the pediatricians, teaching and convincing the maternal parent that it is the proper method of nourishing the infant. This is an endless procedure, beginning with the birth of every first-born child in every family.

In a discussion of breast feeding, various questions arise, the first pertaining to its comparative value in relation to other types of milk feeding. In answer, let us review the contents of cow's milk. The protein of cow's milk differs from that of human breast milk and may cause allergic symptoms, especially if given during the first few days of life when the alimentary tract is quite permeable. The mineral content of cow's milk is not in the right proportion as required by the infant, resulting in the frequent occurrence of rickets in artificially fed babies. We also find scurvy quite often in artificially fed infants due to the boiling and processing which destroys vitamin C. Gastro-intestinal infections have been eliminated in some hospitals where no supplementary feedings are given. The best pasteurized, certified cow's milk may contain 10,000 bacteria per cubic centimeter, whereas breast milk is practically sterile, and it inhibits the growth of bacteria in vitro.

It is true that bottle-fed babies often weigh more than breast fed ones but when it comes to tissue turgor, bone development and resistance to infection, the latter surpass the former. Grulee and Sanford re-

ported on 20,000 infants who were seen by a pediatrician monthly for a period of nine months, and of whom 48 per cent were breast fed, 43 per cent partially breast fed, and 8½ per cent artificially fed. The morbidity rate was twice as high in the artificially fed infants with a mortality rate 10 times as high as in the breast fed groups. These physicians agree that breast feeding gives a much greater immunity to infection, with partial breast feeding giving considerable immunity. They claim, in conclusion, that "if one hopes to reduce the infant mortality rate further, it must be done by breast feeding."

But the above conviction that breast milk is so superior to other types of milk for babies does not settle the problem for us by any means. There is always the question to combat, "Can breast milk be procured successfully under all conditions?" In answer, let me cite the findings from the records of babies born since 1940 in one of our Birmingham clinics which have been intensively studied. Out of 100 cases, 74 were entirely breast fed for six months or longer, 10 were partially so fed from 2 to 6 months, and 16 were artificially fed. Of the 16, 4 babies were twins, one baby was adopted, one was premature, one mother had active tuberculosis, one mother was insane, and 2 mothers worked. Several of the babies were weaned before having been brought to the clinic. In only 2 of the 100 cases was it necessary to put the infants on artificial feeding because the mothers had insufficient quantities of milk. Only 3 of the 74 breast fed babies were under average weight at 6 months of

age. But, of the 26 infants who were not entirely breast fed, 11 were underweight.

It is incorrect to maintain the belief that what can be accomplished with clinic patients cannot be attained with private patients. More objections to breast feeding are raised by private patients, it is true, but cooperative planning and persuasion on the part of the physician and nurse can overcome the obstacles quite successfully. Of 200 private patients in Birmingham, 69 per cent have breast fed their babies for 6 months or more, 21½ per cent partially breast fed theirs from 2 to 6 months, and 9½ per cent did not breast feed theirs at all. Of these, most of the artificially fed babies were weaned before seeing a pediatrician. Several were nursed 2 to 3 months and then left in the care of others while the mothers went to army camps. Four were weaned because the mothers had insufficient supplies of milk. Two of these mothers with insufficient supplies of milk were primiparas and over 40 years of age.

In due consideration of all the factors involved in this problem the primary responsibility rests with doctors and nurses. McNeil, in the British Medical Journal, says that the majority of babies not breast fed are weaned in the first month of life due to the failure of doctors and nurses to overcome the difficulties of breast feedings and therefore weaning is for reasons "trivial and unnecessary." This, he so aptly words it, "results in a colossal waste of the best infant food available and also a waste of time and money, with a loss of thousands of lives."

The fact that the inauguration of breast feeding is beset with many difficulties is well established. Among these are the mental as well as the physical state of the mother. Her fear and anxiety, coupled with unwillingness to go through the inconvenience accompanying breast feeding, can all be assuaged and overcome by patient, constructive teaching on the part of the doctor ministering to her during her period of pregnancy. A great deal of such anxiety and fear is due to ignorance regarding the actual facts. There are a few conditions, such as tuberculosis and severe heart disease, which warrant artificial feeding of the infant. However, acute illnesses and difficult labor are not in this category, as so many women

are led to believe. Local conditions, such as retracted nipples or fissures, the cause of much discomfort, may be prevented in many cases by antenatal care. If fissures do occur, soothing ointments and postponement of nursing for 24 hours or longer, with manual expression of the milk, will usually clear up the condition. Excessive engorgements of the breasts may be treated by diminishing the amount of fluids given the mother. Forty per cent of all deaths from carcinoma in women are from cancer of the breast, rarely ever found in women who have nursed their babies. Scanty or diminished lactation, as shown by failure of the baby to gain weight, may be overcome by nursing both breasts at each feeding, by more frequent feedings, or occasionally by giving one or two *small* complementary feedings, which prevent loss of weight. It is customary in many hospitals to give such complementary feedings to all babies regardless of whether or not there is a need for them. This is a grave error. It keeps the baby from becoming hungry and thus from nursing well from the breast. The supply of breast milk depends upon the baby's demand. If the baby has complementary feedings there will be no vigorous nursing of the breast and consequently the mother's milk supply will be diminished. If it can possibly be avoided, babies should not be discharged from the hospital until they are gaining satisfactorily. The Birmingham custom is to send the baby home on the fifth day, just as the milk supply is becoming established. The mother's return to her home and household duties causes a diminution in the milk supply.

The babies also offer certain difficulties inasmuch as they may feel drowsy and refuse to nurse. This can easily be taken care of by feeding the child when it is awake and hungry rather than rigidly adhering to the formal rules of 4-hour feedings. Simsarian most wisely words his opinion on the matter: "It is not necessary that an infant be taught to nurse if hunger is allowed to develop and not dulled by complementary feedings." Another familiar reason for weaning is colic or vomiting, both of which are caused by the baby's getting too much milk or feeding too rapidly, and does not signify that the mother's milk does not agree with the child. On the contrary, if

the vomiting has an organic basis, as in the case of pyloric stenosis, breast feeding *must* be maintained as it aids greatly in the success of any medical or surgical treatment. McNeil is also of the opinion that weaning because of vomiting is wrong.

In summary, it would be ideal to have prospective mothers made aware of the fact that human milk is perfectly designed for the nutrition of the infant and that there are no difficulties connected with its establishment which cannot be overcome by proper education and a little more patience than is required of her for artificial feeding of the baby.

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THE EPIPLOIC APPENDAGE

ITS ROLE IN THE PRODUCTION OF ACUTE ABDOMINAL SYMPTOMS

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The occurrence of acute abdominal symptoms and signs caused by disease of the epiploic appendages have received intermittent attention in the literature. Only sixty (60) cases^{1, 2, 3, 4, 5, 6} have been encountered in a review of the latter, and in only one of these was the correct diagnosis made before operation.⁶ Two such cases have been operated on in my practice in the past two years. The fact that in neither my own, nor the great majority of cases reported in the literature, was the true diagnosis suspected preoperatively has prompted report of the following cases:

REPORT OF CASES

1. Mrs.——, white, female, age 37, was admitted to the hospital on April 17, 1941, with a history of generalized abdominal pain of twelve hours duration, localizing within the last six hours in the right lower quadrant of the abdomen where tenderness developed. Physical examination revealed no significant findings except for

localized tenderness and spasm at McBurney's point. The temperature was 100.2; pulse 90; respiration 16. Leucocyte count 15,600, with 76% polymorphonuclear leucocytes. Preoperative diagnosis of acute appendicitis was made and the abdomen was explored through a McBurney incision. There was slightly more than the usual quantity of clear yellowish peritoneal fluid present. The cecum and terminal ileum presented diffuse reddening of their peritoneal surfaces. The appendix appeared normal. An epiploic tag on the cecum at its junction with the ileum was swollen, about 2 cm. in diameter, tense and reddened. Its removal exposed no diverticulum but only a reddened, underlying cecal wall. The appendix was also removed, and the abdomen closed without drainage. Pathologic report of the removed specimen described vascular engorgement and polymorphonuclear infiltration of the epiploic tag. Except for moderate intestinal distention, which responded to nasal suction siphonage, the postoperative course was uneventful.

2. A/C——, age 21, was admitted to the hospital on February 6, 1943 with a history of generalized abdominal cramps of twelve hours duration followed by a rest period (during night) of twelve hours, and the development of left lower quadrant abdominal soreness and pain thereafter. Physical examination was essentially negative except for very acute tenderness and spasm at the point in the left lower abdominal quadrant corresponding to McBurney's point on the right; the temperature was 99°, pulse 72, respiration 18. Laboratory studies of the blood and urine revealed no significant findings except a total leucocyte count of 8,100 with 87 per cent polymorphonuclear leucocytes. Because of the progressive nature of the symptoms, the acute localized tenderness and spasm, the elevated poly-

1. Fiske, F. A.: Intra-Abdominal Torsion of Appendices Epiploicae. Report of Two Cases and Review of the Literature, Am. J. M. Sc. 192: 345-360, (Sept.) 1936.

2. Randall, H. E.: Acute Gangrenous Appendix Epiploica, J.A.M.A. 99: 1684 (Nov. 12) 1932.

3. Giffin, H. M.: McManamy, E. P., and Waugh, J. M.: Surgical Significance of Epiploic Appendages, Arch. Surg. 45: 351-360 (Sept.) 1942.

4. Vesalius: Quoted by Giffin et al.

5. Littre: Quoted by Giffin et al.

6. Babcock: Quoted by Giffin et al.

morphonuclear count, and the slight temperature elevation, abdominal exploration was advised with the presumptive diagnosis of left-sided appendicitis or diverticulitis of the sigmoid.

The abdomen was explored under spinal anesthesia through a lower left rectus muscle-splitting incision. There was considerably more than the usual quantity of clear blood-tinged fluid in the peritoneal cavity. Immediately under the incision was an epiploic tag of the sigmoid about 2 cm. in diameter. It was bluish black, glistening and tense. Upon separation from the underlying bowel wall, the latter appeared reddened and roughened with fibrin. The tag was removed, the underlying bowel sprinkled with sulfanilamide crystals, and the abdomen closed without drainage. Pathologic report of the specimen described hemorrhagic infarct. Cultures taken from the subjacent bowel were reported no growth after forty-eight hours. Convalescence was uneventful.

COMMENTS

The epiploic appendages are localized pedunculated overgrowths of subserous fat directly continuous with the fat in the layers of the mesentery.⁷ They are formed by reduplication of the peritoneum which enmeshes a variable amount of fatty tissue between its two layers, and consist of small processes or pouches which are confined to the large intestine. None appear on the rectum. The adult human usually has about a hundred such pouches.⁸ Most numerous on the transverse and pelvic colon, they are arranged in two rows: one in relation to the anterior longitudinal band, the other to the postero-internal band. The blood supply is derived from branches of the superior and inferior mesenteric arteries. Their function has been variously described to be (1) protective (as a "bumper" for the intestine),⁹ (2) absorptive⁹ and (3) a reservoir space for redundant blood vessels during the state of bowel collapse.⁹

Pathologic changes may be the result of (1) infection of the epiploic appendage incident to or associated with interference with the blood supply or to lesions of the corresponding segment of the bowel (diverticulitis) or to unknown causes (as in the first case reported here), or (2) mechanical factors due to interference with the blood supply as in Case No. 2 of this report. In

this connection it has been suggested that the fate of these appendages, when not operated on, is either saponification and calcification, with the formation of a free body in the peritoneal cavity, or the formation of a cyst containing oily, straw-colored fluid. The former end result one frequently encounters as a free body in the cul-de-sac during pelvic exploration. The latter, a less frequent finding, was encountered recently in a young man giving a history of an attack of right-sided abdominal pain several months preceding the exploration during which it was found.

In the cases reported in the literature, various combinations of symptoms have been recorded leading to preoperative diagnoses of appendicitis, right side; appendicitis, left side; diverticulitis; tubo-ovarian disease; gall stones; tumor of the sigmoid; degenerated myomata; intestinal obstruction; peritonitis; and twisted ovarian cyst. The symptoms leading to these erroneous conclusions have included pain located in any of the four abdominal quadrants, tenderness, nausea, vomiting and fever. Abdominal pain has been the only constant symptom. Each segment of the colon has been reported as the site of involvement, the greater portion being found on the sigmoid.

Five deaths have been recorded.¹ In two of these patients the disease of the epiploic appendage was an incidental finding. In three patients, however, this condition, by progression to abscess formation, intestinal obstruction and general peritonitis, respectively, was directly responsible for death. Baumeister et al.¹⁰ report a case in whom two appendices epiploicae formed an encircling obstruction around the bowel. These possibilities lend importance to an attempt to recognize this entity as a possible explanation of the symptoms in acute abdominal disease not presenting a clear-cut diagnostic syndrome.

It also makes the conclusion inevitable that the thrombosed or inflamed epiploic appendage should be surgically removed.

CONCLUSION

1. Two cases of acute disease of the epiploic appendages are reported.

10 Baumeister, C.; Hargens, C. W., and Morsman, C. F.: Obstruction Due to Appendices Epiploicae, *Ann. Surg.* 107: 153-154 (Jan) 1938.

7. Bland-Sutton: Quoted by Klingenstein.

8. Klingenstein, P.: Some Phases of the Pathology of the Appendices Epiploicae, *Surg., Gynec. and Obst.* 38: 376-382 (March) 1924.

9. Pines, B.; Rabinovitch, J., and Biller, S. B.: Primary Torsion and Infarction of Appendices Epiploicae, *Arch. Surg.* 42: 775-787 (April) 1941.

2. Attention is called to this condition as a possible source of acute abdominal symptoms.

3. Surgical removal of the involved

epiploic appendage is recommended as the proper treatment in the presence of acute inflammation or disturbance of its blood supply.

THE EFFECTS OF ARTERIOVENOUS FISTULA ON THE CARDIOVASCULAR SYSTEM

REPORT OF CASE OF ARTERIOVENOUS FISTULA OF THE COMMON CAROTID ARTERY AND INTERNAL JUGULAR VEIN

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And

BURTON MEADOWS, M. D.*

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The problems of arteriovenous fistula are many. They begin with the inception of the injury that is responsible for its development and continue until the fistula is eliminated.

This paper will deal chiefly with a discussion of the effects that the fistula has on the cardiovascular system, but there are other features of a fistula that should be mentioned, such as the difficulty sometimes encountered in the recognition of the fistula and some of the problems of management.

The vascular injuries usually include aneurysm, arteriovenous fistula, and complete severance of a blood vessel, and they follow penetrating wounds of the body tissues by missiles of small calibre. In civil life these wounds are due to pistol bullets, jack knives, ice picks and similar objects. In combat areas, vascular injuries result from fragmentation of high explosive shells, land mines and grenades. These smaller objects may produce minute wounds, but often there may be extensive injury to the underlying tissues.

This damage to the deeper tissues may be masked by muscle contraction, by the accompanying edema, and by the hematomas that follow injury to the blood vessels. Several days or weeks may be required for the absorption of the blood clot and the readjustment of the injured vessels, and a true diagnosis may be impossible before this occurs.

If a vessel is completely severed, massive hemorrhage may occur at once, but if there

is only a laceration of the walls of vessels, an aneurysm or an arteriovenous fistula may develop, and this will require a much greater time. The differentiation of these last two vascular lesions is determined by their respective physical signs. The failure to diagnose vascular lesions (aneurysms, arteriovenous fistula) can be attributed, in part, to lack of consideration by the first aid attendant or the physician of the possibility

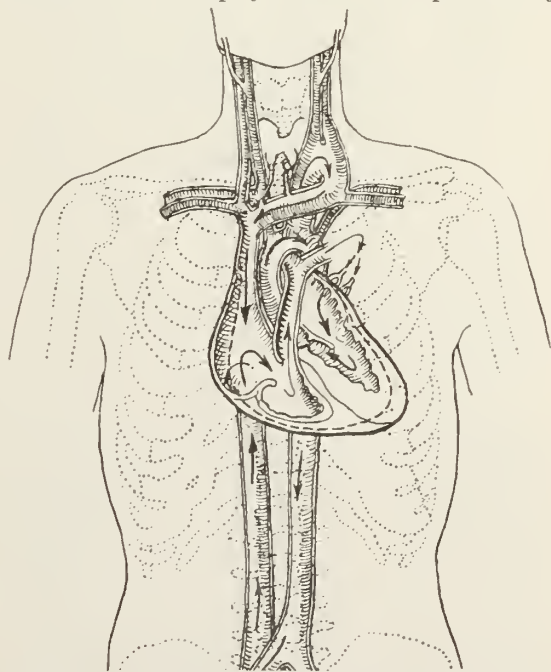


Fig. 1. Original drawing of the cardiovascular system showing fistulous communication between the left common carotid artery and internal jugular vein. Dilatation of the proximal artery and vein. Enlargement of the heart as shown before the operation and reduction in size (dotted line) three months following the removal of the arteriovenous fistula.

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of vascular lesions developing in all penetrating wounds, and to the practice of discharging patients as cured when the external, visible wounds heal.

When an arteriovenous fistula is established, a portion of the blood volume is diverted from the primary circulatory circuit of heart, artery, capillary bed and vein into the newly formed secondary circulatory circuit of heart, artery, fistula and vein.

The degree of damage to the cardiovascular system by the diversion of the blood from the primary to the secondary circulatory systems will depend on the size of the fistula, on the duration of the fistula, and on the sizes and location of the vessels involved. Many of the small fistulae, especially those of the extremities, will heal spontaneously in from six to eight weeks. These small fistulae may not produce systemic changes and may be diagnosed only by the local signs at the site of the lesion. In the authors' (D.C.D.) series, there were three cases in which spontaneous cure occurred. One was an arteriovenous fistula of the brachial artery which was treated with a compression bandage and healed in six weeks. Another case was a fistula of the radial artery which persisted for twelve years with many exacerbations and remissions of symptoms. When the pain became extremely severe, operation was planned and a compression bandage was applied, but the fistula healed before the operation could be performed. The third case was an arteriovenous fistula of the femoral artery at the base of Scarpa's triangle. Spontaneous cure took place after rest in bed for two months.

The characteristic local signs of an arteriovenous fistula are the presence of continuous bruit and purring thrill throughout the cardiac cycle but with intensification during systole; the presence of a bulge or tumor mass at the point of the abnormal anastomosis; a reduction in the blood pressure in the affected artery beyond the fistula; an increase in the venous pressure in the affected vein and its tributaries, as manifested clinically by prominence, and often tortuosity of these veins.

The larger fistulae behave differently in that it is estimated that from twenty to fifty per cent of the blood ejected from the left ventricle escapes through the fistula to the

right heart without reaching the capillary bed.

The diverted blood will be thrown into the venous system proximal and distal to the fistula in such amounts as to produce a general drop in the blood pressure, an increase in venous pressure, and an increase in pulse pressure.

The cardiac response to the increased venous pressure, and its capacity for restoring the lowered blood pressure to a level compatible with health, may be reflected in one of the following ways: (1) if the myocardium has already been weakened by previous disease and if this heart is called upon to meet the emergency caused by the drop in blood pressure and the increase in venous tension associated with a large fistula, acute dilatation of the heart may result and the dilatation may be so rapid that the patient may succumb to the fistula before the cardiac compensating mechanisms can be effective or before any emergency surgical measures can be instituted to save the patient from sudden death; or (2) more commonly, fistula cases run a chronic course during which the myocardial reserve is such that the heart is capable, through its compensating mechanisms, of adjusting itself to the fistula leakage and of functioning at a level compatible with health for many years before any signs of failure appear.

The fall in the general blood pressure affects both the systolic and the diastolic levels. After the heart becomes stabilized through its compensatory mechanisms, the lowered blood pressure will be raised to a level at which the systolic pressure is equal to, or higher than, and the diastolic is definitely lower than that which existed before the formation of the fistula, resulting in an increased pulse pressure. The failure of the diastolic pressure to rise proportionately with the systolic pressure is due to the general lowering of the peripheral resistance. The low diastolic pressure and the increased venous pressure in arteriovenous fistula is similar to that found in aortic insufficiency, except that in aortic insufficiency the leak is into the ventricle, and in arteriovenous fistula the leak is into the vein.

The compensatory mechanisms consist in an increased heart rate and a greater stroke volume, resulting in an increased cardiac

output. These are probably initiated through vagal reflexes which are set up by the carotid and aortic bodies in response to the lowered blood pressure.

It has been demonstrated many times, clinically, experimentally, and by postmortem examination that dilatation of the proximal vein, artery, and heart occurs. Holman^{1, 2} attributes this dilatation to the fact that there is an increased blood volume. Not only is there an increase in the minute volume of blood flowing through the shorter circuit, but also, as time goes on, there is an increase in the total blood volume. Reid³ was unable to demonstrate an increased blood volume experimentally, but stated that it did occur in fistula patients who developed pronounced heart damage. He pointed out, however, that in cardiac failure due to any cause there seemed to be an increased total blood volume, and that it might be questioned whether the increased blood volume caused the dilatation of the heart or whether the cardiac failure caused the increased blood volume. Lewis and Drury⁴ attributed the dilatation of the heart and proximal vessels partly to degenerative changes in the vessel and heart musculatures. They believed that the general decrease in blood pressure resulted in deficient circulation through the coronary arteries and through the vasa vasorum. Holman states that this theory is discredited by the fact that after a period of time hypertrophy of the cardiac musculature often occurs, and results in some improvement in the efficiency of the circulation. This could not occur if the coronary circulation were deficient, he states. The hypertrophy is considered to be due to the extra work done by the heart while the fistula is open. In a recent publication, Elkin states that the true cause of the cardiac changes is not yet known.

The increased pressure in the vein in a fistulous system interferes with the venous return from the peripheral capillary bed. Stasis is produced and may result in edema, ulceration, pigmentation and temperature changes, the mechanism being somewhat similar to that which occurs in venous stasis due to any other cause.

Occlusion of an arteriovenous fistula produces a sudden increase in both systolic and diastolic pressures and a slowing of the pulse rate. This is due to the elimination of the secondary circuit with its low resistance and the substitution of the normal capillary circuit with its high peripheral resistance. The slowing of the pulse is a reflex response to the increased blood pressure and is probably mediated through the aortic and carotid bodies and vagus nerve.

This phenomenon was first described by Nicelandoni in 1875, and was later described independently by Branham in 1890. It is commonly called Branham's bradycardia phenomenon.

**BRANHAM'S BRADYCARDIA
PHENOMENON
REPRESENTS THE EFFECT OF THE CLOSURE OF
AN ARTERIOVENOUS FISTULA BY
DIGITAL PRESSURE**

- (1) INCREASED BLOOD PRESSURE.
DIASTOLIC INCREASE GREATER THAN SYSTOLIC.
- (2) SLOWING OF THE PULSE RATE.
- (3) DISAPPEARANCE OF THE CARDIAC MURMUR.

The blood pressure increase results from the elimination of the secondary blood circuit with its low resistance and replacement of the capillary (primary) circuit with its high peripheral resistance.

Slowing of the pulse is a reflex response to the increased blood pressure probably mediated through the aortic and carotid bodies and vagus nerve (cardio-inhibitory fibres).

Chart 1. Represents Branham's Bradycardia Phenomenon.

If the fistula remains closed permanently, the systolic and diastolic pressures gradually return to a lower level due to compensatory reduction in the total blood volume. If the cardiac and arterial changes have not been too severe or of too long duration, a gradual return to normal size may occur.

1. Holman, Emile; *Anatomic and Physiologic Effects of An Arteriovenous Fistula*, Surgery 8: 362-382 (August) 1940.

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TREATMENT

The arteriovenous fistula patient should be treated expectantly, and, if possible, should not be operated on until the collateral circulation is well established. This usually requires from three to six months after the development of the fistula. In a small per cent of cases, certain complications may make immediate operation imperative, such as infection, secondary hemorrhage, rapid cardiac damage, or compression of collateral vessels or adjacent nerve trunks by the increasing size of the aneurysmal sac.

Matas⁵ recommends a method for promoting the development of collateral circulation by having the patient compress the involved artery at the site of the fistula for periods of several minutes each, two or three times daily. This is most applicable in fistulae of the carotid vessels.

STANDARD CURATIVE OPERATIVE PROCEDURES

The essential thing in the operative cure of arteriovenous fistula is to eliminate all possibility of any blood ever again passing through the fistula.

The opinion of D. C. Elkin⁶ and of other writers is that the operation which fulfills this requirement best is the quadruple ligation of both artery and vein and excision of the fistulous sac. However, certain conditions may arise in which other operative procedures offer better results, or are less hazardous. For example, in a fistula of the internal carotid at a high level it may be impossible to ligate the distal limbs. In such cases, Mont Reid advocated excision of the proximal vein and twisting the vein on itself to close off the fistula, the occlusion being maintained by anchoring the vein to the upper adjacent soft tissues. In large arteriovenous fistulae of the subclavian vessels, quadruple ligation and excision of the fistula is difficult and often dangerous because of the position, because of the tortuosity of collaterals and the presence of adhesions, and because of the proximity of these fistulae to the large nerve trunks. In three such cases

Mason⁷ has achieved good results by quadruple ligation of artery and vein, transvenous approach and closure of the fistula, excision of the vein, then release of the ligatures on the artery with restoration of the normal arterial flow.

Bigger,⁸ in a recent article, heartily recommends this procedure for fistulae of the lower extremities, in preference to quadruple ligation and excision of the fistulous sac, because he has observed that the latter operation is often followed by persistent circulatory deficiency. Restoration of the artery by this method is applicable in the cases of young, vigorous patients. However, in older patients who are more likely to have atheromatous changes in their vessel walls, the attempt to close the fistula without excising the involved segment of the artery is likely to lead to the later development of an aneurysm at the point of the closure.

The ligation of the proximal artery not only will fail to effect a permanent cure but will also definitely interfere with the circulation in the peripheral vessels and will be likely to terminate in gangrene of the tissues distal to the point of ligation. This is especially true in arteriovenous fistulae of the lower limbs. Normally, the peripheral circulation in arteriovenous fistula is aided by the collateral vessels and will be sufficient to conserve the actual vitality of the limb, even though the nutrition of the limb is lowered. When the principal blood supply is shut off by the application of the proximal ligature, the distal end of the artery, now mainly fed by the collateral vessels, will bleed backward through the fistula into the venous channels and the main effect of the collateral supply is destroyed. The mechanical effect of ligation of the proximal artery is not the only cause of the ischemia, as the ligation will produce reflex arterial spasm and a reduction in the development of collaterals. The vasomotor change following ligation alone is that of vasoconstriction, whereas the change following both ligation and division of an artery is that of vasodilatation.

5. Matas, Rudolph: Testing the Efficiency of the Collateral Circulation as a Preliminary to Occlusion of the Great Surgical Arteries, *J. A. M. A.* 63: 1441-1447 (Oct.) 1914.

6. Elkin, D. C.: Arteriovenous Aneurysm, *Surg., Gynec. and Obst.* 80: 217 (Feb.) 1945.

7. Mason, J. M.: Traumatic Arteriovenous Aneurysms of the Great Vessels of the Neck, *Ann. Surg.* 109: 735-748 (May) 1939.

8. Bigger, I. A.: Treatment of Traumatic Aneurysms and Arteriovenous Fistulas, *Arch. Surg.* 49: 170-179 (Sept.) 1944.

REPORT OF CASE

D. J., a colored female, aged 36, entered the hospital for operation of an arteriovenous aneurysm of the left common carotid artery and left internal jugular vein.

Chief Complaints: Pain in the left chest and back, headache, shortness of breath with exercise, periodic attacks of epistaxis of left nostril, periodic strangling spells while drinking water, or on suddenly getting up from sitting position, or leaning forward, and fast heart beat.

Previous History: Five and one-half years ago, she sustained a stab wound of the mid-portion of the left neck. This was followed by massive hemorrhage from the wound. The patient fainted. She was carried to a hospital and given emergency treatment. Bleeding was brought under control with closure of the skin wound. She was told the bleeding resulted from a blood vessel injury. She remained in the hospital fourteen days. The skin wound had healed

on leaving the hospital, but there was a small lump or mass at the site of injury when she was discharged from the hospital. She was under observation and reported to the hospital at frequent intervals for a period of three months. She did not suffer any pain from the lump in her neck, nor were there any body changes to suggest disturbance of circulation until three years later when she noticed that the lump in her neck began to increase in size, but it was free of pain and soreness on manipulation. About this time she noticed defective vision in the left eye. She was fitted with glasses, but only temporary improvement came from wearing glasses. Simultaneously, with the eye picture, she began to suffer with the complaints enumerated above. She consulted a physician and was told she had heart trouble (high blood pressure and leakage of the heart). Measures were instituted, such as the administration of digitalis, with no apparent improvement. She was then instructed to go to bed and remain for three weeks. On one occasion, and at a later date, she was confined to her bed for one week. Her symptoms at this time were progressive. When examined by us, we found a large, soft tumor mass in the left neck region along the course of the common carotid artery, and the local physical findings were in line for arteriovenous fistula. X-ray examination of the chest revealed enlargement of the heart. Pulse rate was 96, blood pressure was approximately the same on both arms, 135/75 left and 130/72 right. Compression over the fistula area reduced the pulse from 94 to 78 per minute. The blood pressure with compression of the fistula was unchanged, 135/72. The failure of the blood pressure to increase to any greater degree was probably due to the large aneurysmal tumor, and to



Fig. 2. Photograph of patient with arteriovenous aneurysm of the left common carotid artery and internal jugular vein. The aneurysmal mass is seen to extend from the level of the maxilla down to the sternum. The scar seen in mid-portion of the aneurysmal mass represents point of the original injury that was responsible for the arteriovenous fistula.

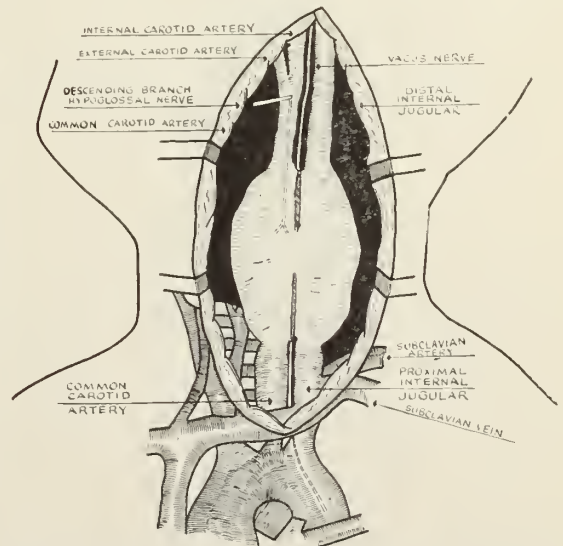


Fig. 3. Diagram showing the aneurysmal mass after it was exposed, with a dilatation of the proximal artery, contracture of the distal limb of artery and dilatation of vein. The vagus nerve and its relation to the aneurysmal mass and the descending branch of the hypoglossal are shown.

the failure of the compression to close off the fistula.

OPERATION

Part I. A longitudinal skin incision extending from the upper third of the neck down to the sternoclavicular joint was made along the medial surface of the sterno-mastoid muscle. Incision was then carried through the platysma layer, exposing the fascia of the neck. The skin-platysma flap was dissected on either side of the wound for good exposure. All superficial veins were ligated. The external jugular vein was found large and tortuous, and this was preserved and retracted to the upper lateral skin wound. The deep fascia was incised along the sterno-mastoid muscle throughout the length of the incision. The muscle was then divided in the lower third of the wound. The upper and lower flaps of muscle were reflected to their corresponding angles of the wound. The anterior belly of the omohyoid and sternohyoid muscles were retracted inwardly. The scalenus and posterior belly of the omohyoid muscles were retracted outwardly. The aneurysmal sac then came into view, and it measured 18cm. in length and 10 to 12 cm. in diameter. The maximum dilatation of the aneurysmal sac was confined to its mid-portion. The lower end of the aneurysmal mass was found to extend beneath the clavicle.

Part II. For adequate exposure of the lower end of the mass, the skin wound was extended downward on the clavicle and the clavicle was disarticulated from the sternum and the clavicle and its attached muscles were retracted outwardly. The aneurysmal mass was found to extend beneath the clavicle, and with gentle sponge retraction on the lower pole of the aneurysmal

mass, the mass was lifted from its subclavicular position and the fascia of the carotid vessels came into view and was incised. The incision in the carotid sheath extended down to near the arch of the aorta, and the common carotid was found dilated, its walls thickened with a corresponding dilatation of the internal jugular vein. Each vessel was then temporarily ligated with braided silk. The point of ligation of the common carotid was 3 to 4 cm. distal to its emergence from the arch of the aorta. Following the ligation of the artery and vein, the tension within the aneurysmal sac was brought under control to where the exposure of the upper limbs (artery and vein) was easily accomplished. Temporary ligation was then made to the distal limb of the common carotid and internal jugular vein at a point 2 cm. below the bifurcation of the common carotid. Following the quadruple ligation, a twenty minute observation was made of the patient to determine the changes that might occur when the common carotid circulation was shut off. During this study, palpation revealed a fair volume of the internal carotid pulse, and examination of the corresponding eye did not reveal any pupillary change; also, the pulse rate decreased from 96 to 84 per minute. With the presence of the internal carotid pulse and the absence of pupillary changes, we felt reasonably sure that the collateral circulation was well established and quadruple ligation with excision of the sac was safe. This was carried out by triple ligation and excision of the proximal and distal artery and double ligation of both limbs of the internal jugular vein. The distal limb of the artery was excised below its bifurcation. In the removal of the arteriovenous aneurysmal sac, many adhesions were encountered, and the collateral vessels on the bed of the sac were found to be increased in number and size. The vagus nerve was embedded in the wall of the sac, and the portion of the nerve that traversed the sac was thickened and enlarged to twice its normal size.

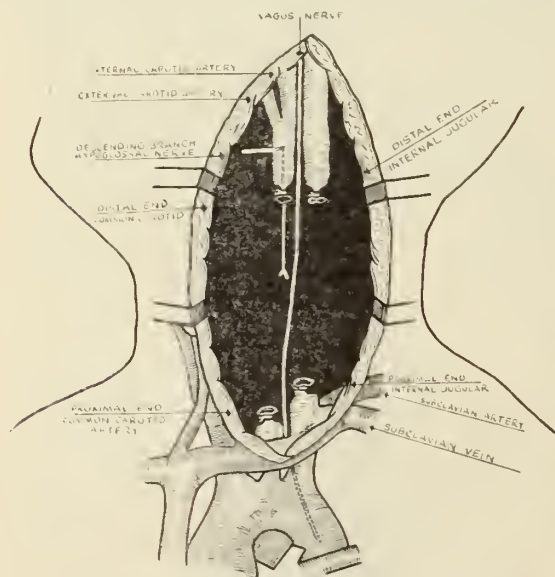


Fig. 4. The operative field after the aneurysmal tumor had been resected. Triple ligation of the proximal and distal limbs of the common carotid, and ligation of the proximal and distal limbs of the internal jugular vein. The vagus nerve and descending branch of the hypoglossal are shown.

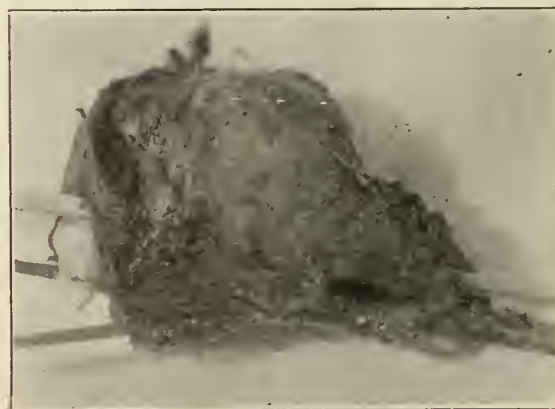


Fig. 5. Photographs of the arteriovenous aneurysmal tumor with guide in both artery and vein channels. The middle guide to the left of tumor mass is directed to the fistulous opening which measured 1.2 cm. in diameter. The dilatation of the proximal artery and both limbs of the internal jugular vein are shown.

The descending branch of the hypoglossal nerve was preserved as it emerged along the anterior portion of the internal and upper limb of the common carotid artery and upper portion of the aneurysmal mass.

Part III. Closure of the wound was as follows: the clavicle was connected with the sternum, using interrupted silver wire sutures; the sternomastoid muscle was approximated with interrupted sutures; and closure of the deep fascia, platysma and skin was effected with similar type sutures. Silk was used throughout the operation. The time required for operation was four hours and fifteen minutes. Ethylene anesthesia was administered, and the patient was given 500 cc. of citrated blood and 1000 cc. of 5% glucose in saline during operative procedure.

Blood pressure on completion of the operation



Fig. 6. Photograph of patient three months following surgery.

was 130/74, pulse rate 92. Blood pressure at the beginning was 130/70, the pulse 80. She had an uninterrupted convalescence and the only sign suggestive of cerebral disturbance was a transient hemianopsia involving the external vision of the corresponding eye, in which the patient was not able to see external objects when looking forward. This appeared during the night following

operation and disappeared within 48 hours. The disturbance of speech that the patient had before operation has greatly improved, and no doubt this was secondary to pressure injury on the recurrent laryngeal branch of the vagus nerve during the existence of the aneurysmal tumor.

Prenatal Care—Prenatal care begins when a woman suspects that she is pregnant and consults a physician. Ideally, and quite impractically, it should begin with a medical examination before pregnancy occurs, which would mean, in a small proportion of cases, that conception would be advised against. It is an encouraging fact, however, that most women who plan to be delivered by an obstetrician, and an increasing proportion of women who plan to be delivered by a physician, now place themselves under medical care at once. As corollary, they thus place upon their medical attendants the responsibility for their welfare, and that of their unborn children, with the proviso, of course, that they themselves follow the regimen laid down for them.

The general plan of prenatal care includes:

1. A detailed history, a complete physical examination, a careful pelvic examination, and certain essential laboratory examinations, all of which are carried out at the first visit, the first consideration of which is to determine that the patient is actually pregnant. If her menstrual history is irregular and if physical and pelvic signs are not clear-cut, the Aschheim-Zondek test, or one of the less complicated tests recently introduced, should be performed.

2. Instructions for hygienic mode of life, which include attention to bowel and bladder function; a properly balanced diet; provision for loose, sensible clothing and shoes with low heels; eight hours' rest at night, preferably with a daily rest period also; moderate exercise, preferably walking; restriction of smoking and drinking; prohibition of sexual intercourse after six months, of tub baths after seven and a half months, and of douches at any time.

3. Reference of the patient to her dentist, and to consulting physician as necessary.

At the first visit the proper relationship between physician and patient should be established. She should be told that gestation is essentially a physiologic function and is likely to remain so in a woman under supervision who follows her physician's instructions. But she should also be told that it is a process which may become dangerously pathologic in a very short time. Therefore she should be warned to report to the physician without delay any apparent abnormality. As a result, the physician is likely to be disturbed unnecessarily a good many times, though he is very unlikely to have among his cases many complications not detected in their incipiency. Furthermore, a woman of self-control and intelligence will not have many complaints, while women of other temperaments will have a good many, regardless of instructions.—*Levy, New Orleans M. & S. J., June '45.*

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THE DECISION IN THE MOBILE CASE

STATE OF ALABAMA—JUDICIAL DEPARTMENT
THE SUPREME COURT OF ALABAMA
OCTOBER TERM, 1944-45

1 Div. 227

Howard S. J. Walker

v.

The Medical Society of Mobile County, et al.
Appeal from Mobile Circuit Court, in Equity

SIMPSON, JUSTICE:

Complainant, Dr. Howard S. J. Walker, appeals from a final decree dismissing his bill seeking to restrain the appellee Medical Society and its secretary from enrolling Dr. Virginia E. Webb and Dr. John H. Greene as members thereof.

The former appeal of this case was to review rulings on the pleadings. The holding was that the bill of complaint made a case for equitable cognizance and that, on the facts alleged, complainant was entitled to the writ of injunction excluding the two doctors from membership in the Society. See *Medical Society, etc. v. Walker*, 16 So. 2d 321.

On coming in of the answer, however, and the taking of testimony, an entirely different issue was presented and it now appears that (1) the Medical Association

of the State of Alabama, after due hearing at its annual meeting, had ordered and directed the County Society to enroll the two appellees as members and (2) that, though entirely eligible for membership in the Society, the two doctors had been blackballed and excluded from membership therein by the complainant and others under an agreement so to do regardless of their qualifications, vel non, for membership.

It is complainant's contention that the County Society is invested with the sole, exclusive, autocratic, and irremediable right and authority to exclude from membership any doctor, whether eligible or not, whatever the basis of such denial of membership, and that the State Association is without authority or jurisdiction to control action in the premises. The present appeal is from a final decree, adversary to this position and denying the complainant relief, dismissing the bill, discharging the temporary injunction, and ordering the Secretary of the County Society to enroll the two doctors as members.

In analyzing the ultimate issue to be decided, it is well to look into the historical background of the Medical Association of the State of Alabama, its relation to the County Society, and to set forth at the outset the pertinent provisions of the Constitution and by-laws of the two organizations, and to indicate their intergrated legal status with the State and County Boards of Health.

"The Medical Association of the State of Alabama" was first incorporated by legislative enactment February 13, 1850, (Acts 1849-50, p. 315) without any public functions or duties. In 1873 at an annual meeting held at Tuscaloosa, a Constitution was adopted declaring its aims and functions and prescribing its mode of organization, the character of its membership and the names and duties of its officers. Extantly, the Association is functioning under its Constitution of 1908.

Article II of the present Constitution assigns as its objects:

"(1). To organize the medical profession of the State in accordance with principles and plans herein embodied;

"(2). To secure careful and reliable accounts of the endemic and epidemic diseases of the State;

"(3) To encourage the study of medical botany, medical topography, and medical climatology of the State;

"(4). To promote the establishment of a high standard of professional and moral education for medical men, for the purpose of protecting the people of the State against the evils of ignorance and dishonesty;

"(5). To endeavor to secure the enactment of wise and just laws for ascertaining by examination the qualifications of all persons who propose to offer their services to the people of any part of the State for the purpose of treating diseases of human beings;

"(6). To foster fraternal relations among the physicians of the State, and thus develop a spirit of loyalty to pure and exalted principles of professional ethics;

"(7). To combine the influence of the medical men of the State for the purpose of protecting their legitimate rights and of promoting the sanitary welfare of the people."

Under Article IV, Section 1, "All members of county medical societies holding charters from the Association shall be, *ipso facto*, members of the Association."

In addition to the usual officers, the State Medical Association elects a Board of Censors who serve for five years and who are in effect an executive committee, a court of impeachment and review, an auditing board and a board of examiners for admission to practice medicine. Article XIII of the Constitution reposes in the Board plenary powers and certain authorities and duties with reference to the selection and discharge of the State Health Officer, and provides that said Board "shall be authorized to act in three capacities, to wit: (1) as a State Board of Censors; (2) as a State Board of Medical Examiners; (3) as a State Committee of Public Health."

By the Act of February 19, 1875 (Acts 1874-5, p. 130), the Medical Association of the State of Alabama was constituted a Board of Health of the State of Alabama, and the County Medical Societies, in affiliation with the State Association and organized in accordance with the provisions of its Constitution, were constituted the Boards of Health for their respective counties and as such were under the general direction of the State Board of Health.

These provisions were reenacted in every Alabama Code down to and including that of 1907. Later acts amended, revised and extended, under a recodification, the health laws of the State, but the structure of the

system was not essentially altered.—*Parke v. Bradley*, 204 Ala. 455, 86 So. 28.

The present organization of the Health Department of the State is found in Title 22, Chapter 1, Sections 1 et seq., Code 1940. Section 1 constitutes the Medical Association of the State of Alabama the State Board of Health. Section 2 constitutes the State Board of Censors, of said Association, the State Committee of Public Health, with the Governor as a member and ex-officio chairman. Section 3 requires the State Committee of Public Health to act for the State Board of Health when not in session and when the Committee is not in session that the State Health Officer shall act for the Board and the Committee. Section 4 constitutes the Boards of Censors of the County Medical Societies, in affiliation with the Medical Association of the State of Alabama and organized in accordance with the provisions of its Constitution, as the County Boards of Health of their respective counties to be under the general supervision and control of the State Board of Health (the State Association). Section 6 vests in these Boards of Health the sole and exclusive control of the public health and interdicts the setting up of any rival Board of Health or executive body for the exercise of public health functions. Other sections set forth the authority and jurisdiction of the State and County Boards of Health, provide for the election of the State and County Health Officers, and prescribe their various duties, etc.

It thus appears that the State Association, and the County Societies through their Boards of Censors, are impressed with public functions and are in effect the representative guardians of the public health of the various communities of the State.

Of the Medical Association of the State of Alabama, this court has already said:

"We are * * * of the opinion, having regard to its organization, aims, and activities, and its relation to the state board of health and to the public welfare in general, that it is a quasi public corporation, charged with duties and responsibilities which it cannot evade, * * *" *Parke v. Bradley*, 204 Ala. 455, 459, 86 So. 28.

The Constitution of the State Association provides that the County Medical Societies of the State, when organized under constitutions and by-laws approved by the State Association, are entitled to the issuance of charters from the parent body. A

charter was granted the Medical Society of Mobile County pursuant therewith on the 19th day of April, 1912, since which date the Society has been in affiliation with the State Association. Under the Constitution of the County Society five members of the Society are elected to membership on the County Board of Censors, which Board is endowed with the same three capacities with regard to the County as is the State Board of Censors with the State. (We note that the State Constitution, which is controlling, authorizes the County Boards of Censors to act in only two capacities, viz. (1) as a Board of Censors, (2) as a County Board of Health.

Article 3 of the Constitution of the Medical Society of Mobile County defines as among its objects:

"Art. 3. The objects of this society shall be:

"(1) To accept the responsibilities and discharge the duties that devolve upon it as the legal board of health of the county.

* * * *

"(5) To co-operate with the Medical Association of the State of Alabama in the accomplishment of the great aims set forth in its Constitution;

* * * *

"(7) To so extend the membership as to make it include, if possible, *all worthy and deserving members of the profession residing in the county.*"

We shall see, hereafter, that the appellee Medical Society, holding its charter from the Medical Association of the State of Alabama, and acting in affiliation with it, is subordinate to and subject to the supervisory powers of the Association.

Article XIII of the Constitution of the State Association provides, inter alia, with regard to the State Board of Censors, as follows:

State Board of Censors Jurisdiction

"Sec. 9.—When acting as a State Board of Censors to it shall be referred without discussion:

"(1) All motions, resolutions, or inquiries, of whatever nature, affecting the organization, policy, or welfare of the Association, or of any one, or more of the county societies in affiliation therewith;

* * * *

"(9) All appeals from the decision or verdict of any county society in affiliation with the Association;

"(10) Any other question germane to those enumerated above may, upon a majority vote, either with, or without discussion, be referred to the Board of Censors."

Article XV of the Constitution of the State Association deals with the chartering and functioning of County Medical Societies. Section 1 makes provision for the issuance of County charters. Section 2 prescribes the eligibility for membership therein. Section 3 authorizes, *subject to the approval of the Association*, the adoption of rules and regulations for the government of the Societies, the election of officers, etc., and the performance of "*all other needful acts not inconsistent with the Constitution or ordinances*" of the State Association.

Article XV further provides (we supply emphasis):

"Sec. 4.—They (County Medical Societies) shall, *under the general control and supervision of the Association*, exercise such jurisdiction over their members as is authorized by their respective constitutions, ordinances, and by-laws, except, that when in attendance upon a meeting of the Association members of county societies shall be under the jurisdiction of the constitution and ordinances of that body.

* * * *

"Sec. 14.—County societies in affiliation with the Association shall abide by all decisions of the Association regardless of the attitude assumed by their respective delegates toward any question that has been settled by the Association."

Article XX stipulates for the "Appellate Jurisdiction" of the State Association, among other matters, in all questions of *policy that may have been adjudicated by a County Society*, and provides in Section 3: "§ 3.—The Association shall have the right to confirm or amend in such way as it deems proper, any verdict rendered, or conclusion reached, by a county society, *the decision of the Association being final.* * * *"

The exclusive prerogative to adopt such provisions for supervisory control of the subordinate Societies is so stated in Article XXI, Section 1: "§ 1.—The Association shall have the right to adopt such ordinances and by-laws for its own government *and that of the county societies* as it may deem proper."

Prior to the institution of this suit, and after action in the County Society of rejecting the two doctors mentioned, the State Association in attempting to exercise its supervisory powers over the Medical Society of Mobile County, upon notice to all parties concerned, duly reviewed this action of the subordinate organization and determined as to each applicant for member-

ship "that there had been no charges filed or evidence presented against (them) and no constitutional, professional, ethical, or moral reasons offered to sustain" the County Society's act. The said applicants were found and declared to be entirely eligible for membership and, after recommendation of its Board of Censors, the State Association, by unanimous vote, ordered and directed the County Society to enroll them as members of the local Society.

We have given this case attentive and studious consideration and have reached the conclusion that the trial court was correct in denying complainant relief and in decreeing "that the respondents, Dr. Virginia E. Webb and Dr. John H. Greene * * * by virtue * * * of the proceedings, decisions, and mandates of the Medical Association of the State of Alabama, had in such matters; (were) entitled to have their names enrolled as * * * members by the respondent, Dr. W. W. Scales, as the Secretary of said (County) Society."

The Constitution, and by-laws adopted in conformity therewith, of the State Association, so long as they do not contravene some public law or principle of public policy, constitute an enforceable contract as between the members thereof, as between the Association on the one side and the individual members (as Dr. Walker) on the other and as between the two organizations; and their respective rights, powers, duties and liabilities are measured accordingly.—7 C. J. S. 34, § 11 (b); 5 C. J. 1341; *Weatherly v. Medical Society of Montgomery County*, 76 Ala. 567; *Des Moines City Ry. Co. v. Amalg. Ass'n, etc.*, (Iowa), 213 N. W. 264.

The Medical Society of Mobile County, by charter duly issued to it by the State Association, is affiliated with and subordinate and subject to the jurisdiction of the parent organization, in accordance with the stipulations of the Constitution and by-laws of the latter. The County Society, and Dr. Walker as a member thereof, were thereby subject and amenable to the provisions of the Constitution and by-laws of the State organization, which measured their relations to it and constituted the contract with that organization by which each is bound.—*Brotherhood of Railroad Trainmen v. Barnhill*, 214 Ala. 565, 108 So. 456; *Shapiro v. Gehlman*, 272 N. Y. S. 624, 628; *Des Moines City Ry. Co. v. Amalg. Ass'n of Ry. Em-*

ployees, supra; *Polin v. Kaplan*, (N. Y.), 177 N. E. 833; *In re Haebler*, (N. Y.), 44 N. E. 87.

A fair and reasonable construction of the above quoted sections of the Articles of the Constitution of the State Association, when considered in the light of the purposes the whole structure was designed to effect, makes it clear that the Association duly acted within the scope of its supervisory jurisdiction over the County Medical Society in ordering the enrollment as members of the two eligible physicians thus excluded. By the integrated structure of the two organizations the County Society was "under the general control and supervision of the Association" in regard to such matters (§ 4, Art. XV) and must "abide by all decisions (constitutional) of the Association regardless of the attitude assumed by their (the County Societies') respective delegates toward any question * * * settled by the Association" (§ 14, Art. XV), which decisions shall be final (Art. XX, § 3).

Let us see how this interpretation bears upon the case as presented by the evidence.

It is uncontroverted that the two doctors were worthy and reputable practicing physicians of Mobile County and possessed of all the qualifications for membership in the Society. They were both native Alabamians and, in effect, conceded to be eminently eligible for membership. The record discloses that appellant and several other members of the Society who were present and voting when the applications of these two persons were rejected had previously combined and agreed among themselves to vote to reject all applications for membership, regardless of eligibility, pending the duration of the present war and that this agreement pertained as to the present two applicants and was carried out accordingly, thus resulting in their exclusion. One of the members of this combination, before the meeting when the applications were to be voted upon, told Dr. Webb that he intended to keep all new applicants out of the Society during the emergency and that he intended to blackball her. The appellant, in his testimony, confirmed such an agreement and asserted that this physician was one of the members of the so-called combination.

To perpetuate such an agreement (for no one can, with accuracy, prognosticate the

end of the present conflict) could finally paralyze the effectiveness of the local Society and if transacted long enough might, if the distinguished gentlemen in the voting combine should survive long enough, result in the restriction of membership only to themselves and would thereby repose in them unintended and autocratic authority. Undoubtedly the Constitutions of the two organizations, fairly interpreted, intend no such objectives, nor that the State Association should be powerless to redress such action. However worthy the motives of those members in so voting, it was within the competence of the State Association, on a question of such fundamental policy, to (quoting from Art. XX, Sec. 3, above) "amend * * * the conclusion reached by the County Society, the decision of the Association being final."

It is important to note, and must be here considered, that by the law constituting the State Association as the State Board of Health, it has become the residuum of official power and is impressed with attributes and functions of a highly public nature.—*Parke v. Bradley*, supra. To it has been delegated specific governmental prerogatives and duties by the State of Alabama, resulting in the repositing with it of exclusive franchises and powers of an eminent degree and of the highest concern to the public welfare. A similar status prevails as to the Board of Censors of the County Medical Society which, mutatis mutandis, is the County Board of Health. The State Association and the County Societies in affiliation therewith, when organized under constitutions and by-laws approved by the State Association, have accepted these delegated responsibilities, which applies to the Medical Society of Mobile County, and it is plain that the parent organization, entrusted with such grave public duties, should not be powerless to direct and control action of a subordinate County Society in matters of the character now under consideration, which must undoubtedly have a direct effect upon the public welfare. We think the comprehensive terms of the quoted sections of the State Constitution, construed in the light of the public character of the respective organizations, are due this interpretation.

The design for superior control of the State Association is carried into the act creating the County Boards of Health, though, of course, the Boards of Health are not legally identical with the County Societies. As to this, Section 4, Title 22, Code 1940, uses the same language as is embodied in Art. XV, Sec. 4, of the State Constitution (note supplied italics), to wit: § 4. The boards of censors of county medical societies (etc.) are constituted county boards of health of their respective counties, * * * *but shall be under the general supervision and control of the state board of health.* (etc.).

To further elucidate the proposition and to illustrate the reasonableness of so construing the Articles of the State Association Constitution, the public character of the organization should be kept in mind and that one of the designs of the organization, as indicated in its Constitution, was to accept the responsibility of safeguarding the public health, delegated to it by State law. This bears importantly on the question at issue.

There appears to be a certain opprobrium on any physician who is not a member of his County Society and the State Association. As a non-member he may not procure insurance protection against malpractice, he is barred from membership in the American Medical Association, is generally frowned upon by other members of the profession, and, of course, cannot become a health officer since the selection of same is made from the membership of the Society.

The reasonable effect of thus excluding all eligible, incoming physicians from Society membership would be to make them outcasts of the organization, to become members of which all eligible and worthy physicians naturally aspire. It would be sophistical to contend that this result would not strongly tend to discourage the best and most skillful members of the medical profession from locating in Mobile County, and that this would not have a direct and deleterious effect upon the public health of the county where there is necessarily a need for such doctors, due to the exceptionally patriotic conduct of a large number of the local practitioners who entered the armed services, thereby resulting in a shortage of civilian physicians.

It is manifest that the Constitution of the State Association, integrated as it is with

the public health laws of the State, did not, nor does it, intend that the Association should be impotent to correct such action in the discharge of its accepted duties and responsibilities of guarding the public health.

On the contrary, it is clear to us that, reasonably construed, the Constitution of the Association vests in the parent body superior authority and exclusive jurisdiction in matters such as here considered and to fail to give effect to the various provisions indicative thereof, so oft repeated throughout the body of that Constitution, would be to ascribe to them no more than a meaningless tautology, evidently not intended.

The proposition, that the parent organization by its constitutional mandates may legally assume such exclusive supervisory jurisdiction over the subordinate Society, has been set at rest by our own court. Such Association, operating by and through the members and for their welfare, may adopt laws for their government and to administer their several rights, powers and benefits, and to this end may invest the parent Association with such exclusive prerogatives as here appearing and, in the absence of fraud, the decisions of the parent organization made pursuant therewith are binding upon the members as well as the local Societies.—*Brotherhood of Railroad Trainmen v. Barnhill*, supra.

In the past years the State Association, with which complainant and the County Society were thus affiliated, has, in effect, construed the various sections of the Constitution as vesting in the State Association original jurisdiction in matters of analogous nature. This alone has sustentive force. The interpretation placed upon contracts between the parties and practiced by them will ordinarily be accepted by the court.—*Birmingham Water Works Co. v. Hernandez*, 196 Ala. 438, 71 So. 443; *Merchants' National Bank v. Hubbard*, 220 Ala. 372, 125 So. 335; Ala. Dig., Contracts, Key 170(1); 17 C. J. S. 755, § 325.

Again, the construction placed upon these constitutional provisions is entirely reasonable and consistent with the integrated structure of the medical bodies involved and the rule seems to be established that the courts will not review the correctness of the interpretation placed upon the Constitution and by-laws of a voluntary Association by

its duly authorized tribunal—here the State Association and its Board of Censors—in matters merely procedural or jurisdictional, if such interpretation is fair and reasonable.—*Harris v. Missouri Pac. Ry. Co.*, 1 Fed. Sup. 946; *Pratt v. Amalg. Ass'n. etc.*, (Utah), 167 Pac. 830; *Long v. B. & O. Ry. Co.*, (Md.), 141 Atl. 504; *Simpson v. Grand Internat. B. of L. Engineers*, (W. Va.), 98 S. E. 580.

It results from these considerations that, though the Medical Society of Mobile County is a voluntary association, membership to which is not an independent, enforceable right but is a privilege that may be accorded or withheld at the will of the Society, if in accordance with the duly constituted laws of said Society and consistent with the constitutional edicts of the State Association, yet the complainant is not entitled to the injunction here prayed for because of the mandate of the State Association duly issued to the Society to enroll the two physicians aforesaid.

The decree is affirmed.

Affirmed.

All the Justices concur.

THE WAGNER-MURRAY-DINGELL BILL (S. 1050 OF 1945)

Reprinted from the June 2, 1945 number of the Journal of the American Medical Association.

On May 24 Senator Wagner introduced into the Senate of the United States the bill about which there have been so many conjectures and preliminary announcements during the last few months. The text contains 185 pages. The measure was referred to the Senate Committee on Finance, of which Senator George of Georgia is chairman. The measure was introduced into the House of Representatives by Representative Dingell of Michigan and is there known as H. R. 3293. In the House it was referred to the House Committee on Ways and Means, of which Representative Doughton of North Carolina is chairman. These are the committees to which the previous version was referred.

Elsewhere in this issue appears the first of a series of analyses of this measure, prepared by the Bureau of Legal Medicine and Legislation of the American Medical Association. The present analysis is confined to the section of the bill that proposes a sys-

tem of compulsory sickness insurance. In subsequent issues of *The Journal* attention will be paid to some of the other phases of social security covered by the proposed act. These include grants and loans for construction of health facilities, grants to states for public health services and for maternal and child health and welfare services, also a comprehensive public assistance program and a national system of public employment offices.

The Wagner-Murray-Dingell measure—1945 version—would take over the proposals of the Hill-Burton bill for hospital and health center construction and make of it a ten year program at ten times the cost. This is long term planning with a vengeance, in view of the experimental character of the proposal, at best. Instead of the advisory board with authority proposed by the Hill-Burton measure, the 1945 Wagner-Murray-Dingell bill would substitute a National Advisory Hospital Construction Council, appointed by the Surgeon General and without authority, except to review applications and make recommendations. The new Wagner-Murray-Dingell bill also proposes to extend the grants for venereal disease and for the tuberculosis program. The section on public health service would change the present authorization of \$20,000,000 a year for grants to the states with an authorization to appropriate a sum sufficient to carry out the purposes. The annual amount available to the Surgeon General of the Public Health Service for demonstrations, training of personnel and administrative expenses is increased from \$3,000,000 to \$5,000,000 a year. A formula is established designed to give more aid to the poor states and relatively less to the richer states.

Another section of the 1945 version relates to federal cooperation with the states in providing health and welfare services for mothers and children. The states are to develop their own plans, which are to be approved by the chief of the Children's Bureau. Here also a formula is established for aiding the poorer states to a greater extent than the larger ones.

Section 6 of the measure is devoted to the public assistance program, authorizing federal matching for money payments to the aged, dependent children, the blind and other needy individuals. The seventh and

eight sections provide for an expanded and strengthened national system of public employment offices. Under this section a National Advisory Employment Policy Council is set up to formulate policies and to advise in the administration of the service.

The section of greatest interest to the medical profession at this time is section 9, which would establish a national sickness insurance system. The proponents of the measure minimize its compulsory aspect in every way they possibly can. Nowhere is the word "compulsory" used. In both the abstract of the measure and in Senator Wagner's presentation all the emphasis is placed on the benefits which presumably every one in the United States would receive from this measure; Senator Wagner reaffirms that complete freedom is offered to every one with regard to such medical services as he may give or receive. Indeed, Senator Wagner went so far as to say that "health insurance is not socialized medicine; it is not state medicine." With this pronouncement most people with any understanding of the situation will differ. They will insist that compulsory sickness insurance with federal control is both socialized medicine and state medicine. Health insurance, or actually sickness insurance, is a method of paying medical costs in advance and of distributing such costs. There are differences between various forms of sickness insurance. Senator Wagner emphasizes freedom of medical practice, which he says is carefully safeguarded because each insured person is entitled to choose his own doctor. But he must choose his own doctor from among the physicians or groups of physicians in the community who agree to go into the insurance system. Certainly the insured person cannot secure the application of any of the funds that he has paid for the payment of a physician who is outside the system. The statement is made that "the participating doctors are likewise free to choose the method through which they are to be paid from the insurance fund." As a rule, they must choose as a group either a fee-for-service plan with a fee table, a capitation fee or a salary. In the summary of the bill released by Senator Wagner the statement is made that "the Surgeon General of the U. S. Public Health Service—a doctor—would administer the technical and

professional aspects of the program." This version of the Wagner-Murray-Dingell bill places tremendous authority in the hands of the Surgeon General, as was placed by previous versions. This time there is to be a National Advisory Medical Policy Council, to be appointed from panels of names submitted by professional and other organizations concerned with medical services, education and hospitals and to include also a representative of the public. This council is wholly advisory and without authority. Incidentally, there is nothing in previous law that says the Surgeon General of the U. S. Public Health Service must be a physician. The President can appoint the Surgeon General by selecting any of the members of the regular corps, which includes physicians, sanitarians, economists, doctors of public health and a wide variety of other personnel in the field of medicine.

Among the first of the editorial comments to appear relative to the program for expanded social security was that of the New York Times, published on May 26. The Times says that certain questions are to be asked of any proposal like the Wagner-Murray-Dingell bill, namely "Will it provide relief where it is needed without producing it where it is not needed? Will it mitigate the penalties for failure or misfortune without weakening the incentives to production and success? Will it provide aid to individuals without making them politically dependent and without dangerously extending the power of the central government?" To these questions the Times replies that under the bill as it stands it is more doubtful whether these questions can be answered satisfactorily. The Times points out that vast new programs would be undertaken under the new bill and existing programs would be tremendously liberalized. The unemployment benefits place a premium on not working. The old age benefits in some instances would pay a man more for retiring than for continuing at his job. The differential treatment would make the states competitors for especially favorable formulas. The total costs of the bill, involving an 8 per cent tax on the payroll, would be a direct tax on employment and would tend to discourage employment at a time when it is our chief problem. Moreover, the Times feels that the sponsors have

greatly underestimated the actual cost of their measure.

Physicians should obtain copies of this proposed act and study carefully all of its provisions, so that they may see for themselves the extent to which this act would revolutionize medical care in the United States. Senator Wagner points out that he has consulted this time with the American Federation of Labor, the Congress of Industrial Organizations, the Physicians Forum, the Committee of Physicians for the Improvement of Medical Care and the National Lawyers Guild, among other organizations, in obtaining suggestions for modification of his previous version. He has not consulted with the American Medical Association or, as far as is known, with any of the members of its representative bodies or councils. The so-called Physicians Forum is a group of several hundred physicians, mostly inclined toward communism and practically all living in New York City. The Committee of Physicians for the Improvement of Medical Care, once known as the Committee of 400, now maintains a mailing list of around 1,000 physicians and is actually controlled by an inner group of a few physicians who do not in any way represent a majority of medical opinion. Thus the bill completely disregards the majority opinion of the 125,000 physicians who constitute the American Medical Association and who provide the major portion of medical practice for the people of the United States. The bill also disregards the 60,000 physicians now in the armed forces who have sacrificed as much as any other group in the country in the great war in which our nation is now engaged. This obstinacy is typical of the manner in which Senators Wagner and Murray and Representative Dingell have from the first endeavored to impose their notions regarding the care of the public health and of the sick on the people of the United States.

THE WAGNER-MURRAY-DINGELL BILL S. 1050 OF 1945

AN ANALYSIS BY THE BUREAU OF LEGAL MEDICINE AND LEGISLATION, AMERICAN MEDICAL ASSOCIATION, MAY 26, 1945

IN GENERAL

The Wagner-Murray-Dingell bill differs in many respects from the previous one, some of which differences will be italicized or otherwise

referred to in this and succeeding analyses. For one thing it contains ninety-five more pages. Briefly and in broad outline, here is what the bill contains: It adds a new title to the Public Health Service Act for grants and loans for hospitals and health center construction. This title corresponds closely with the provisions of the Hill-Burton hospital construction bill with significant exceptions. It provides for grants and services to develop more effective measures for the prevention, treatment and control of venereal diseases and tuberculosis and to extend and improve public health work. It proposes grants to states for maternal and child health services, for services for crippled children and for child welfare services. It would make available grants to states for public assistance to needy individuals, including medical care for such individuals. Section 9 proposes to amend title II of the Social Security Act to provide a national social insurance system. The amended title would provide for (a) prepaid personal health service, (b) a national

DIVISION OF CONTRIBUTIONS

Program	Employer	Employee	Total
1. Retirement, survivors and extended disability insurance	1.0%	1.0%	2.0%
2. Medical care and hospitalization insurance	1.5%	1.5%	3.0%
3. Unemployment insurance	1.0%	1.0%	2.0%
4. Temporary disability insurance	0.5%	0.5%	1.0%
Total contributions	4.0%	4.0%	8.0%

system of unemployment and temporary disability insurance (including cash benefits for disability from sickness which causes unemployment), (c) retirement, survivor and extended disability benefits, (d) a national social insurance trust fund, (e) credit for military service, (f) extended coverage to include an estimated additional 15,000,000 persons, (g) contributions or taxes by employers, employees and the self employed and (h) certain general provisions to apply to the operation of the title.

Some of the foregoing parts of the bill will be dealt with in subsequent analyses. The present analysis will be confined to that section of the bill proposing a system of compulsory health insurance to be "made available to 135,000,000 persons," in the words of Senator Wagner. In passing, it is perhaps significant to note that the term "compulsory" appears in no place in the releases made available by Senator Wagner to explain the contents of his bill and to construe its provisions. Rather the emphasis has been placed in such releases on the contention that the legislation will not interfere with the normal relationship between the patient and his physician and on the point of view that the health insurance provisions will not be mandatory on the medical profession.

The national social insurance system will be financed in general from a trust fund established by a 4 per cent employer and a 4 per cent employee contribution on wages and salaries up to the first \$3,600 a year paid or received after Dec. 31, 1945. The first bill placed the ceiling at \$3,000 a year and the employer-employee contribution at 6 per cent each. The contribution

to be made by the self employed will be 5 per cent of the market value of services subject to the same ceiling limitation. The contribution by states and localities and by their employees will be 2.5 per cent of the first \$3,600. The contributions that employers and employees will make to finance the system will be distributed as shown in the table.

MEDICAL, HOSPITALIZATION, DENTAL, NURSING AND RELATED BENEFITS IN GENERAL

Part A of the amended title II proposes a system of compulsory prepaid personal health service insurance to covered employees and certain specified dependents. As used in this part, the term "personal health service benefits" is defined to include general medical benefits, special medical benefits, general dental benefits, home nursing benefits, laboratory benefits and hospitalization benefits. There was no provision in the first bill for dental or home nursing benefits. When the term "general medical benefit" is used, it means services furnished by a legally qualified physician or by a group of such physicians, including all necessary services such as can be furnished by a physician engaged in a general or family practice of medicine, at the office, home, hospital or elsewhere, including preventive, diagnostic and therapeutic treatment and care, and periodic examination. The definition in the earlier bill did not refer to services rendered "by a group of such physicians."

The term "special medical benefit" is defined as necessary services requiring special skill or experience, furnished at the office, home, hospital or elsewhere by a legally qualified physician who is a specialist or consultant with respect to the class of service furnished, or by a group of such physicians, or by a group of physicians including such specialists or consultants.

The term "general dental benefit" is defined to mean services furnished by a legally qualified dentist or by a group of such dentists, including all necessary dental services such as can be furnished by dentists engaged in the general practice of dentistry, with or without the aid of an assistant or hygienist under his direction, and including preventive, diagnostic and therapeutic treatment, care and advice, and periodic examinations. Similarly, the term "special dental benefit" is defined to mean necessary services requiring special skill or experience, furnished at the office, hospital or elsewhere by legally qualified dentists (with or without the aid of an assistant, hygienist or anesthetist under his direction) who is a specialist or consultant with respect to the class of service "furnished by a group of such dentists, or by a group of dentists, including such specialists or consultants."

"Home nursing benefit" means nursing care of the sick furnished in the home by (1) a registered professional nurse or (2) a practical nurse who is legally qualified by a state or, in the absence of state standards or requirements, who is qualified with respect to standards established by the Surgeon General after consultation with the Advisory Council and with competent professional nursing agencies and who furnishes nursing care under the

direction or supervision of the state health agency, the health agency of a political subdivision of a state or an organization supplying and supervising the services of registered professional nurses.

A beneficiary entitled to laboratory benefits will receive such necessary laboratory or related services, supplies or commodities as the Surgeon General may determine, including chemical, bacteriologic, pathologic, diagnostic and therapeutic x-ray and related laboratory services, *refractions and other ophthalmic services furnished by a legally qualified practitioner other than a physician*, physical therapy, special appliances prescribed by a physician and eye glasses prescribed by a physician or other legalized practitioner. If any of the services, supplies or commodities covered by this definition are provided a hospitalized patient, or by a physician or dentist incidental to services rendered, payment therefor will be included in payments for hospitalization or for services furnished, respectively.

"Hospital benefit" is defined to mean an amount, as determined by the Surgeon General after consultation with the Advisory Council created by the bill (S. 1161 required the determination to be made "after approval by Social Security Board"): not less than \$3 and not more than \$7 (\$6 in the first bill) for each day of hospitalization not in excess of thirty days in a period of hospitalization, not less than \$1.50 and not more than \$4.50 (\$4 in the first bill) for each day of care in an institution for the care of the "chronic sick." In lieu of such compensation, the Surgeon General may enter into contracts with participating hospitals for the payment of the reasonable cost of hospital service at rates for each day of hospitalization neither less than the minimum nor more than the maximum applicable rates previously mentioned. In S. 1161 such contracts were conditioned on the approval of the Social Security Board.

A new provision relating to these contracts with participating hospitals provides that payment may be included in a contract for inclusive services of a participating hospital and its staff or attending staff and that such payment will not affect the right of participating hospitals to require payments from patients with respect to the additional cost of more expensive facilities furnished for lack of ward facilities or occupied at the request of the patient, or with respect to services not included within a contract.

A hospital may become a "participating hospital" if it is an institution which provides all necessary and customary hospital services and is found by the Surgeon General to afford professional service, personnel and equipment adequate to promote the health and safety of individuals customarily hospitalized in such institutions. The Surgeon General may accredit a hospital for a limited variety of cases and may accredit an institution for the care of the "chronic sick," taking into account, for the purpose of such limited accrediting, the type and size of the community which the institution serves, the availability of other hospital facilities and such other matters as the Surgeon General may deem relevant.

NATIONAL ADVISORY MEDICAL POLICY COUNCIL

The pending bill contemplates the creation of a National Advisory Medical Policy Council. This Council will consist of the Surgeon General as chairman and sixteen members appointed by him *without regard to the Civil Service laws and subject to the approval of the Federal Security Administrator*. The appointed members will be selected from panels of names submitted by professional and other agencies and organizations concerned with medical, dental and nursing services and education and with the operation of hospitals and laboratories and from among other persons, agencies or organizations informed on the need for or provision of medical, dental, nursing, hospital, laboratory or related services and benefits. A new provision in the bill requires the membership of the Advisory Council to include (1) medical and professional representatives and (2) public representatives, in such proportions as are likely to provide fair representation to the principal interested groups that furnish and receive personal health services, having regard for the functions of the Advisory Council.

Appointed members will hold office for four years, with terms of office staggered, and will receive compensation at the rate of \$25 a day for the time spent on official business with the Council plus actual and necessary traveling expenses. The Council will be required to meet not less frequently than twice a year and whenever at least four of the members request a meeting. The Advisory Council will advise the Surgeon General with reference to *questions of general policy and administration* in carrying out the provisions of this particular section of the bill, including (1) professional standards of quality to apply to personal health service benefits; (2) designation of specialists and consultants; (3) methods and arrangements to stimulate and encourage the attainment of high standards through the services of general or family practitioners, specialists and consultants, laboratories and other auxiliary services and through the coordination of the services of physicians and dentists with those of educational and research institutions, hospitals and public health centers, and through other means; (4) standards to apply to participating hospitals, to the relations or coordination among hospitals and to the establishment and maintenance of the list of participating hospitals; (5) adequate and suitable methods and arrangements of paying for personal health service benefits; (6) studies and surveys of personal health services and of the quality and adequacy of such services; (7) *policies and procedures for determinations of disability*; and (8) grants-in-aid for professional education and research projects. Under the first bill the Advisory Council was also directed to advise the Surgeon General with respect to the establishment of special advisory, technical local or regional boards, committees or commissions. Under the pending bill the Advisory Council is authorized to establish such groups, whose membership may include members of the Council or other persons or both, to advise on general or

special questions, professional and technical subjects, questions concerning administration, problems affecting regions or localities, and related matters.

SELECTION OF PHYSICIANS; ACCEPTANCE OF PATIENTS; PANELS

The Surgeon General will be required to publish and otherwise make known in each local area to individuals entitled to benefits the names of medical and dental practitioners and groups of practitioners who agree to furnish services as benefits and to make such lists of names readily available to individuals entitled to benefits. A new provision in the pending bill provides that such lists must include general or family practitioners and qualified specialists and consultants. With respect to qualified specialists and consultants the lists must indicate the class or classes of specialist or consultant services for which each has been qualified. Any physician, dentist or nurse legally qualified by state to furnish any services included as personal health service benefits will be legally qualified to furnish such benefits, including any group of physicians, dentists or nurses or combinations thereof whose members are similarly qualified. A limitation contained in the first bill conditioning the participation by a physician on rules and regulations prescribed by the Surgeon General has been eliminated.

Likewise a beneficiary may select any practitioner appearing on a panel to treat him subject to the consent of the practitioner or the group of practitioners, as the case may be. This freedom of choice of practitioner is conditioned, however, on the right of the Surgeon General to prescribe maximum limits to the number of potential beneficiaries for whom a practitioner or group of practitioners may undertake to furnish services, and such limits may be nationally uniform or may be adapted to take account of "relevant factors." A restriction in the old bill that the freedom of choice of physician must be exercised in accordance with such rules and regulations as the Surgeon General may prescribe has been eliminated. A new provision, however, has been added to the effect that every beneficiary and every group of beneficiaries will be permitted to make selection of a practitioner through a representative of his own choosing.

As in the bill introduced in the Seventy-Eighth Congress, the services of specialists, or consultants as added by the pending bill, will ordinarily be available only on the advice of the general practitioner. This is modified in the new bill so that such services may be made available on the advice of a specialist or consultant attending the individual or "when requested by an individual entitled to specialist and consultant services as benefits and approved by a medical administrative officer appointed by the Surgeon General."

The Surgeon General will designate what shall constitute specialist or consultant services. He will likewise determine who are qualified to render such services, in accordance with general standards prescribed by him after

consultation with the Advisory Council. In establishing standards and in designating specialists and consultants, the Surgeon General will be required to "utilize standards and certifications developed by competent professional agencies" and must "take into account the personnel resources and needs of regions and local areas."

PAYMENTS FOR THE SERVICES OF PRACTITIONERS

Payments to general medical and family practitioners or to general dental practitioners may be made (1) on the basis of fees for services rendered, according to a fee schedule, (2) on a per capita basis, the amount being according to the number of individuals entitled to benefits who are on the practitioner's list, (3) on a salary basis, full time or part time or (4) on a combination or modification of these bases, as the Surgeon General may approve. The method of payment will apparently be determined in each local area as the majority of the general medical and family practitioners or of the general dental practitioners, respectively, may elect. A new provision authorizes the Surgeon General to make payments by another method from the one selected in a local area to those general medical and family practitioners or general dental practitioners who do not elect the method designated by the majority. Any of the methods of making payments indicated in the foregoing may be used, as the Surgeon General may approve, in making payment to groups of practitioners that contain designated specialists or consultants as well as general or family practitioners. The Surgeon General may negotiate agreements or cooperative working arrangements to utilize inclusive services of hospitals and their staffs and may enter into contracts for such inclusive services.

Payments to designated specialists and consultants may be made on the basis of salary (whole time or part time), "per session," fee for service, per capita or other basis or combination, as the Surgeon General and the specialists and consultants may agree.

Rates or amounts of payment for particular services or classes of service may be nationally uniform or may be adapted to take account of relevant regional or local conditions and other factors. The bill contains a new provision that payments shall be adequate, "especially in terms of annual income or its equivalent and by reference to annual income customarily received among physicians, dentists and nurses, having regard for age, specialization and type of community." Payment will be commensurate with skill, experience and responsibility involved in furnishing service. In any local area where payment for services of a general or family practitioner is only on a per capita basis, the Surgeon General, the bill proposes, shall make per capita payments on a pro rata basis among the practitioners and groups of practitioners of the local area on the panel with respect to those individuals who after due notice have failed to select a general or family practitioner or who, having made one or more successive selections, have

been refused by the practitioner or practitioners selected.

In each local area the provision of general medical or dental benefits will be a collective responsibility of all qualified general medical or family practitioners or of all qualified general dental practitioners, respectively, in the area who have undertaken to furnish such benefits.

HOME NURSING BENEFITS

The bill provides that home nursing benefits shall ordinarily be available only on advice of a legally qualified attending physician but may be made available also when requested by an individual entitled to the benefits and when approved by a medical officer designated by the Surgeon General. The method to be used in paying for home nursing services is not clear.

LIST OF PARTICIPATING HOSPITALS

The Surgeon General is directed to publish a list of institutions which he finds to be participating hospitals in accordance with general standards prescribed by him after consultation with the Advisory Council. Any institution which is not included in the list, or any institution having been removed from the list, may petition the Surgeon General for a hearing. The bill provides that the Surgeon General shall exercise no supervision or control over a participating hospital unless it is owned or leased by the United States. No requirement for participation by a hospital may prescribe its administration, personnel or operation.

LIMITATIONS OF GENERAL MEDICAL, GENERAL DENTAL, HOME NURSING AND LABORATORY BENEFITS

The Surgeon General, after consultation with the Advisory Council and subject to the approval of the Administrator of the Federal Security Agency, may determine that every individual entitled to general medical, general dental or home nursing benefits may be required by the physician, dentist or nurse attending him to pay a fee with respect to the first service or with respect to each service in a period of sickness or course of treatment if he believes that such a limitation is necessary and desirable to prevent or reduce abuses of entitlement to the benefits. The maximum amount of such fee shall be fixed by the Surgeon General after consultation with the Advisory Council and with the approval of the Administrator of the Federal Security Agency. He may also limit the application of such fees to home calls, to office visits or to both.

A new provision in the bill would authorize the Surgeon General, after consultation with the Advisory Council and with the approval of the Administrator of the Federal Security Agency, to restrict the content of the general dental, special dental or home nursing benefit. On and after Jan. 1, 1947, however, the restricted content of the general dental or special dental benefit must include at least (1) examination (including x-rays) and diagnosis, (2) prophylaxis, (3) extraction of teeth which are considered by the dentist and an attending physician to be likely to be injurious to the general health of

the individual and (4) treatment of acute diseases of the teeth, their supporting structures and adjacent parts, including fractures of the teeth or jaw. He may also fix an age above which the restrictions on content shall apply.

As to the home nursing benefits, restriction of content may limit the service to part time care on an hourly or visit basis or may limit the types of cases for which such benefits shall be available, or the maximum amount of service per case, or otherwise.

The maximum number of days in any benefit year for which an individual may be entitled to hospitalization will be sixty (thirty in the bill introduced in the Seventy-Eighth Congress). This maximum may be increased to not more than one hundred and twenty days in a calendar year if funds are adequate.

No application for hospitalization benefits will be valid with respect to any day of hospitalization if filed more than ninety days after such day, or with respect to any day of hospitalization more than thirty days following the diagnosis of tuberculosis or psychosis, or with respect to any day in a hospital or other institution for mental or nervous disease or tuberculosis.

Likewise the Surgeon General, after consultation with the Advisory Council and with the approval of the Federal Security Administrator, may limit for any calendar year or part thereof the cost of laboratory benefits. Such limitation may relate to a class of services, supplies or commodities, to maximum payments per beneficiary in a benefit year, to a specified fraction of the cost or to combinations thereof.

PROPOSED METHOD OF ADMINISTRATION

The bill provides that the Surgeon General shall perform the duties imposed on him under the supervision and direction of the Federal Security Agency *as to questions of general policy and administration*. He will be authorized to take all necessary steps to arrange for the availability of the benefits provided. He will be authorized, after consultation with the Advisory Council *as to questions of general policy and administration* and with the approval of the Administrator to negotiate and periodically to renegotiate agreements or cooperative working arrangements with appropriate agencies of the United States, or of any state or political subdivision, and with other appropriate public agencies. He may, too, make such agreements or arrangements with private persons or groups of persons to utilize their services and facilities and to pay fair reasonable and equitable compensation therefor. He may negotiate and periodically renegotiate agreements or cooperative working arrangements for the purchase or availability of supplies and commodities necessary for the benefits provided in the bill and to enter into contracts for such services, facilities, supplies and commodities.

Except with respect to state or local areas for which other arrangements have been made, the Surgeon General will be directed to appoint local area committees to aid in the administration of the part of the bill relating to compulsory health insurance. These committees will include

representatives of persons entitled to receive services and benefits, the practitioners, the groups of practitioners, institutions and agencies furnishing services as benefits, and other persons informed on the need for, or provision of, personal health services. Such committees, the bill provides, must be consulted at frequent intervals and must be kept informed by the local area officers of the Public Health Service with respect to arrangements for the availability of benefits and policies to be followed.

The Surgeon General will be directed to give priority and preference to utilizing the facilities of state and local departments or agencies on the basis of mutual agreements with such departments or agencies. He may delegate to any officer or employee of the United States Public Health Service or of any federal, state or local cooperating department or agency such of his powers and duties, except the prescribing of rules and regulations, as he may consider necessary and proper. He may, after consultation with the Social Security Board, after consultation with the Advisory Council as to *questions of general policy and administration*, and with the approval of the Federal Security Administrator, prescribe and publish such rules and regulations and require such records and reports, not inconsistent with other provisions of the bill, as may be necessary.

The Surgeon General will be required to make a full report to Congress, at the beginning of each regular session, of the administration of the functions devolved on him by the bill, and such reports must include "a record of consultation with the Advisory Council, recommendations of the Advisory Council, and comments thereon."

RELATION TO WORKMEN'S COMPENSATION BENEFITS

No individual will be entitled to any personal health service benefits with respect to any injury, disease or disability on account of which any medical, dental, home nursing, laboratory or hospitalization service is being received, or on application would be received, under a workmen's compensation plan for the United States or of any state.

BENEFITS FOR NONINSURED PERSONS

Benefits may be extended to noninsured persons on behalf of whom equitable payments are made or assured by public agencies of the United States, the several states, or any of them or of their political subdivisions. The bill specifically extends this provision to groups of persons for whom the Congress makes provision under the Social Security Act and other acts of Congress.

ADDITIONAL BENEFITS IN CONTEMPLATION

The Surgeon General and the Social Security Board will be jointly given the duty of studying and making recommendations as to the most effective method of providing dental, nursing and other benefits not already provided for and of reporting their recommendations as to legislation from time to time but not later than two years after the enactment of this bill. The studies and recommendations will relate to ex-

pected costs for the additional benefits and a desirable division of the costs between (1) financial resources of the social security system or other public fund and (2) payments to be required of beneficiaries receiving such benefits. Specifically, the Surgeon General and the Social Security Board are mandated to study and make recommendations as to needed services and facilities for the care of the "chronic sick" afflicted with physical ailments and for the care of individuals affected with mental or nervous diseases, recommendations as to legislation to be submitted from time to time but not later than three years after the enactment of this bill.

GRANTS-IN-AID FOR MEDICAL EDUCATION, RE- SEARCH AND PREVENTION OF DISEASE AND DISABILITY

With the exceptions noted, the provisions in the pending bill authorizing grants for medical education, research and prevention of disease and disability are identical with those that were contained in the original Wagner-Murray-Dingell bill. Under these provisions the Surgeon General will be authorized to administer grants-in-aid to nonprofit institutions and agencies engaging in research or in undergraduate or postgraduate professional education. Such grants will be made with respect to each project (1) for which application has been received from a nonprofit institution or agency, stating the nature of the project and giving the reasons for the need of financial assistance in carrying it out, and (2) for which the Surgeon General finds, with the advice of the Council and *after consultation with other federal departments and agencies concerned with research or professional education* that the project shows a promise of making valuable contributions to the education or training of persons useful to or needed in the furnishing of medical, dental, nursing hospital, laboratory, disability, rehabilitation and related benefits, or to human knowledge with respect to the cause, prevention, mitigation or method of diagnosis or treatment of disease and disability.

Another new provision would make it mandatory that the Surgeon General and the Advisory Council give preference and priority, during the five year period beginning Jan. 1, 1946, to grants-in-aid with respect to projects to aid servicemen seeking postgraduate education as medical or dental practitioners or training for administration of personal health services, disability benefits, rehabilitation services and related services.

To finance this part of the program a certain percentage of amounts expended for benefits from the social security trust fund will be set aside. The amount to be set aside, the bill provides, will equal 1 per cent of the total amount expended for benefits from the trust fund, exclusive of unemployment insurance benefits, or 2 per cent of the amount expended for personal health service benefits after the latter benefits have been payable for not less than twelve months, whichever is the lesser, in the last preceding fiscal year.

EXISTING PREPAYMENT PLANS

Senator Wagner believes that the enactment of S. 1050 will not necessarily result in the displacement of existing prepayment medical service and hospitalization plans. In the statement that he made to the Senate when the bill was introduced he said:

There has been much misunderstanding about the part that voluntary hospitals, group service organizations, existing voluntary insurance or prepayment plans and similar agencies may play in the social insurance system. Let me emphasize that our bill makes a place for them, so that they can continue their good work. All qualified hospitals, all qualified medical groups or organizations, will be able to participate in the program as organizations that will furnish services to the insured persons who choose them, they will receive fair payments for the services they furnish as insurance benefits and they will have enlarged opportunities to be service agencies for particular groups or for their communities. This applies to service organizations created by trade unions, consumer groups, employers, nonprofit community groups, churches, fraternal associations, groups of doctors or individual doctors, medical societies or many other kinds of sponsors or combinations of sponsors. The bill not only provides for utilizing existing service organizations but it also encourages the creation of new ones.

The Blue Cross hospital insurance plans will be able to continue to act as representatives of the participating

hospitals and the community groups that own or manage the hospitals, and they will have large opportunities to be important public organizations that facilitate the administration of vital parts of the insurance system. The same will be true for many other community and public organizations.

Medical service groups (private clinics, salaried staffs of hospitals, group-service plans such as the Kaiser or the Ross-Loos plan) furnishing service under the social insurance system would be as free as they are today to select their own staffs and their own method of paying physicians and others on their staffs, irrespective of the method of payment which prevailed among the individually practicing physicians or dentists of the local area.

The bill itself, however, does not specifically mention existing prepayment medical service and hospitalization plans. It does direct the Surgeon General, after consultation with the Advisory Council as to questions of general policy and administration, and with the approval of the Federal Security Administrator, to make agreements or arrangements with private agencies or institutions, or with private persons or groups of persons, to utilize their services and facilities. To what extent the importance and effectiveness of existing plans could be preserved under such agreements or arrangements is a matter about which many will entertain serious doubts.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

B. F. Austin, M. D.
State Health Officer

SUMMER SPORTS

As the warm weather of spring is succeeded by the hot weather of summer, tired, restless people find themselves looking forward eagerly to respites from the routine of their jobs and to sports activities of many kinds. Prominent on almost everyone's list of favorite summer sports are swimming and diving. These have the advantages of being available to persons who cannot get away from their desks and work benches for longer than a few hours, of requiring comparatively small outlays for equipment, and of being about as enjoyable as any.

Alabamians are especially fortunate in this respect. This State is abundantly supplied with streams of all sizes to suit all tastes and preferences. Most of them, too, are within a short distance of our cities and towns, and the sports' enthusiast has little trouble in getting to one which pleases him, unless he is extremely hard to please.

As great as is the enjoyment which Alabama's streams afford, it must be pointed out that they likewise offer dangers, perhaps more serious dangers than the average

person realizes. It is well perhaps to call attention to the fact that the same degree of watchfulness and care which is needed to avoid accidents while one is engaged in one's more normal pursuits is also needed while in or near one's favorite stream.

Surprisingly enough to many people, the danger of drowning is not limited by any means to those who are actually in the water. The State Health Department's Bureau of Vital Statistics made a careful survey of this cause of death several years ago and unearthed the revelation that only about one drowning death out of every four reported during the year covered by the survey had occurred while the victims were swimming. Deaths among swimmers, while constituting the largest single group among all those considered, numbered only six more than those resulting from the overturning of boats and exceeded by only 11 those due to falling into the water from positions other than in boats. Nine persons that year lost their lives while wading and playing in the water, and six were drowned when motor vehicles ran off bridges and ferries, or overturned near streams, or met with other accidents which caused the occupants to be hurled into the water. In view of these fatalities, those preparing to participate in water sports should become

drowning-conscious before making their initial plunge into the water and remain so after they emerge and start home.

Unfortunately, drowning, while the most dramatic of the dangers which face the water sports' lover, is by no means the only one. Several other possibilities of personal tragedy exist and should be taken into account. Some of these are in the nature of accidents, while others are forms of illness.

The present writer has called attention many times to the unwisdom of participation by persons with impaired hearts in the more violent forms of physical exercise.

One of the leading authorities on the human body and the diseases which afflict it is Dr. Milton J. Rosenau, a member of the faculty of the School of Public Health of the University of North Carolina. This man of medicine has the following to say about exercise and heart disease in his textbook *Preventive Medicine and Hygiene*:

"It is questionable whether athletics cause or predispose to heart disease. The great danger, however, lies in overburdening previously damaged, rheumatic or congenitally diseased hearts. The necessity for a careful physical examination prior to engaging in competitive sports should be stressed. . . . Untrained individuals, particularly over thirty, engaged in strenuous exercise may damage their cardiovascular system. Physical exertion should be attuned to the age and condition of the individual."

Heart attacks make their own contribution to the drowning toll. Those who exercise too strenuously and thus expose their impaired hearts to greater strain than they can safely undergo are likely to have cramps and drown before any of their friends can get to them. Those whose hearts are unequal to the strain involved in the water sports in which they indulge but who do not meet such a sudden and dramatic form of death may, nevertheless, unconsciously shorten their lives by many years, just as they would if they were to run to catch a street car or bus, run up stairs, or race a friendly rival in a sudden burst of speed.

It should be emphasized that heart disease, which kills considerably more Alabamians every year than any two other diseases combined, is one of the most insidious forms of illness afflicting the human race. Uncounted thousands of persons have it without being conscious of the fact. For

that reason, it is the part of wisdom for anyone who indulges in strenuous activities of any kind to submit to a general physical examination at regular intervals, with particular attention to the heart. If such an examination shows that this vital organ is in first class condition, then there is no reason why one should not participate in water sports, as well as others, with complete freedom from anxiety and comparatively little danger from this source. Those whose hearts are known to be under par should either avoid water sports entirely or enjoy them only to the extent and in the manner recommended by their physicians. Fortunately, their status usually need not be that of an invalid or semi-invalid, either in the water or while engaged in their normal activities. Just as the heart disease victim may safely enjoy moderately brisk walks and other moderate forms of exercise in the course of his usual activities, so he may enjoy in relative safety the pleasure which comes with swimming and diving, provided of course—and this is most important—he keeps his physical limitations in mind, "takes it easy," and sees that his heart and his whole body receive as much rest as possible between periods of activity. But it should be emphasized that whether such persons engage in water sports at all and, if they do, the form and nature of their participation should be determined by their physicians. There is much too much at stake to take a chance with the advice of well-meaning but medically uninformed friends or be influenced by the too optimistic hope that no harm will be done.

As for those who do not know the true condition of their hearts, even they would do well to take their water sports, like other forms of exercise, in moderation. This admonition is especially applicable to those who have reached or passed middle age.

Another danger to which the water sports' enthusiast is exposed is that of diving into shallow water or, in some cases, into empty pools. The State Department of Health is without information as to how many deaths and injuries are caused in this way, but indications are that the number is larger than the average person would suppose. Like most accidents, this one can be prevented by the exercise of reasonable caution and care. But, also like so many

others, it has powerful potentialities for tragedy.

Several types of injury are caused in this way, but probably the one most to be feared is fracture, or breaking, of the neck or spine. This is a serious condition of course, but, fortunately, not necessarily fatal.

Fracture of the neck or spine should be thought of every time a person is injured by landing upon the head, even when there are no conclusive symptoms of injury of this sort. If the victim of the accident is not able to move his legs or complains of loss of sensation in any part of the body below the area believed to have suffered injury, it is almost certain that a fracture has occurred.

The likelihood of a fracture's proving fatal depends almost entirely upon the care the victim receives. It is unfortunate that most accidents of this kind occur in out-of-the-way places, where medical aid is difficult to obtain and at best usually is a long time in arriving. Under such circumstances, friends of the victims often feel obliged to do what they can for them, and their ignorance as to what should be done, and what should be left undone, is likely to bring death or permanent paralysis.

If the fracture has occurred high up in the body, the victim should not be moved at all by amateur first-aiders, if it is possible to keep him in one place until the doctor arrives. If moving is necessary—as it is in many instances—he should be moved with extreme care, as careless handling is likely to cause the sharp edges of the broken bones to compress or crush the spinal cord and bring instant death. His associates should be particularly careful to see that he is lifted or moved only with his face down on a door or wide board or on a blanket or sheet supported on all four corners and the sides. Needless to say, he should not be turned unless it is absolutely necessary to do so, but, in that case, several of his friends should turn the entire body at once, “like a log,” as someone has described the movement, instead of turning first one part of the body and then another, as is usually done.

No doubt a number of the already mentioned drownings from falling into streams are caused by slippery springboards, soapy areas around swimming pools and streams and faulty slides. But probably there is

no greater danger of broken bones and other injuries than drowning. Those who slip and fall are likely to suffer fractures of various kinds, fortunately, less serious than those we have just been considering. The parts of the body most likely to suffer injury in this way are the knee caps, the legs, the feet, the arms and hands, the skull, the collarbone and the ribs. These injuries should receive prompt medical attention, but in most cases there is little or no danger in moving the victims and taking them home or to doctors' offices in automobiles like most other injured persons.

Serious impairment of the sense of hearing may result from injury to what is known as the middle ear, and injury of this kind may be caused by failure to exercise proper care while diving. This care consists mainly of protecting the outer ear against water by inserting a rubber ear stopper or plug of cotton that has been dipped in vaseline. This plug should be removed between dives and reinserted so as to free the ear of any water that may have entered in spite of the plug. Medical authorities have expressed the opinion that, if this simple precaution were exercised by all swimmers and divers, there would be a great decrease in the number of victims of abscessed ears and mastoiditis.

The nose too may be injured by diving. It is advisable to rest between dives in order that the strain upon the nose's protective mechanism may be interrupted. When water enters the nose, no attempt should be made to force it out until it has had ample time to run out of itself. If it does not do so within a reasonable time, then the diver should open his mouth and, with first one and then the other side of the nose closed, inhale deeply through the mouth. Then he should exhale with only moderate force through the nose. Under no circumstances should the mouth be closed while one tries to rid the nose of water, nor should the cheeks be puffed out. Forced blowing of the nose or clearing of the throat may force water or secretions from the nose into the ears.

It is not the writer's desire or purpose in calling attention to these dangers to diminish your pleasure in participating in water sports. Rather, he hopes that, by calling your attention to them and, it is hoped causing you to take the necessary precautions,

you will be able to enjoy those sports without having to pay for your enjoyment with injury, impairment of an important physical function, or even your life itself. No doubt you will agree that observing the simple precautions that have been suggested is a small price to pay for the privilege of participating in those sports without a tragic aftermath.

BUREAU OF PREVENTABLE DISEASES

D. G. Gill, M. D., Director

CURRENT MORBIDITY STATISTICS

1945

	April	May	E. E.* May
Typhoid	5	6	12
Typhus	14	28	16
Malaria	303	199	263
Smallpox	0	0	3
Measles	73	48	734
Scarlet fever	70	65	33
Whooping cough	126	97	197
Diphtheria	34	22	22
Influenza	110	70	270
Mumps	207	145	234
Poliomyelitis	18	5	2
Encephalitis	2	0	2
Chickenpox	141	104	129
Tetanus	1	6	3
Tuberculosis	228	199	287
Pellagra	3	5	21
Meningitis	18	17	10
Pneumonia	234	171	294
Syphilis	869	910	1762
Chancroid	6	6	11
Gonorrhea	520	406	438
Ophthalmia neonatorum	0	0	2
Trachoma	0	0	0
Tularemia	1	0	1
Undulant fever	8	7	8
Dengue	0	0	0
Amebic dysentery	8	2	0
Cancer	165	262	0
Rabies—Human cases	0	0	0
Positive animal heads	58	90	

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF LABORATORIES

Samuel R. Damon, Ph. D., Director

SPECIMENS EXAMINED

MAY 1945

Examination for diphtheria bacilli and Vincent's	376
Agglutination tests (typhoid, Brill's, undulant fever)	751
Typhoid cultures (blood, feces and urine)	840
Examinations for malaria	794
Examinations for intestinal parasites	1,829
Serologic tests for syphilis (blood and spinal fluid)	27,687
Darkfield examinations	23
Examinations for gonococci	3,250
Examinations for tubercle bacilli	1,596
Examinations for Negri bodies (microscopic)	172
Water examinations	1,187
Milk examinations	2,078
Miscellaneous	548

Total 41,131

BUREAU OF VITAL STATISTICS

Miss Ethel R. Hawley, Acting Director

PROVISIONAL MORTALITY STATISTICS

REPORTED BIRTHS, STILLBIRTHS, DEATHS FROM CERTAIN IMPORTANT CAUSES AND RATES*—
MARCH, 1945

Births, Stillbirths, and Causes of Death	Number of Deaths Registered— March 1945			Rate (Annual Basis)	
	White	Colored	Total	1945	1944
Births, exclusive of stillbirths	**	**	6009	24.4	23.7
Stillbirths	**	**	149	24.2	32.2
Deaths, exclusive of stillbirths	1235	931	2166	8.8	8.5
Infant deaths:					
Under one year	144	131	275	45.8	47.5
Under one month	96	82	178	29.6	28.6
Typhoid and paratyphoid, 1, 2	3		3	1.2	0.4
Epidemic cerebrospinal meningitis 6	5	1	6	2.4	3.7
Scarlet fever 8					
Whooping cough 9	3	4	7	2.8	2.0
Diphtheria 10	1		1	0.4	0.4
Tuberculosis, all forms 13-22	51	64	115	46.8	40.0
Malaria 28		3	3	1.2	0.4
Syphilis 30	9	17	26	10.6	13.0
Influenza 33	30	23	53	21.6	26.1
Measles 35					7.3
Poliomyelitis 36	2	2	4	1.6	
Encephalitis 37	2		2	0.8	0.4
Typhus fever 59	1		1	0.4	0.8
Cancer, all forms 45-55	107	53	160	65.1	57.9
Diabetes mellitus 61	24	14	38	15.5	14.3
Pellagra 69	3	2	5	2.0	1.2
Alcoholism 77	3		3	1.2	1.6
Intracranial lesions	100	87	187	76.1	75.1
Diseases of the heart 90-95	288	141	429	174.5	164.4
Diseases of the arteries 96-99	25	5	30	12.2	6.5
Bronchitis 106	2	3	5	2.0	1.2
Pneumonia, all forms 107-109	72	80	152	61.8	56.7
Diarrhea and enteritis (under two) 119	10	5	15	6.1	2.4
Diarrhea and enteritis (two and over) 120	1	3	4	1.6	1.2
Appendicitis 121	8	8	16	6.5	6.1
Hernia, intestinal obstruction 122	7	7	14	5.7	6.1
Cirrhosis of the liver 124	11	2	13	5.3	3.7
Nephritis, all forms 130-132	96	67	163	66.3	71.0
Diseases of the puerperal state 140-150	10	10	20	32.5	41.7
Puerperal septicemia 140, 142a, 147	1	3	4	6.5	20.0
Suicide 163-164	15	1	16	6.5	2.4
Homicide 165-168	5	20	25	10.2	6.5
Accidental deaths (exclusive of motor vehicle) 169, 171-195	70	44	114	46.4	41.2
Motor vehicle 170	30	6	36	14.6	9.4
All other known causes	195	128	323	131.4	145.6
Ill defined and unknown causes 199-200	46	131	177	72.0	74.2

**Not available.

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific causes per 100,000 population; from puerperal causes, per 10,000 total births.

I am strongly of the belief that the rapid decline in tuberculosis in this country during the last two decades has been due in no small part to the control of bovine tuberculosis. I believe this applies to the mortality, morbidity, and certainly to the infection attack rate.—J. A. Myers, M. D., *Am. Rev. Tuberc.*, Dec. 1944.

BUREAU OF SANITATION
T. H. Milford, M. S. in S. E., Director
QUALITY MILK PRODUCTION

Contributed by
U. D. Franklin, B. S., M. S.
Principal Sanitarian

The necessity for quality in a milk supply is most assuredly becoming more and more apparent. Most people in the milk industry are recognizing the fact that their business must be built on quality milk. Never before in the history of the industry has there been as much interest by plant owners in field men. The ideas concerning the functions of a field man have also changed. Formerly, their chief duties were to solicit milk and build up patronage for the plant. Little time was spent on quality improvement. At the present time, quality improvement is their most important duty.

The production of high quality milk is not a difficult problem. It does not require an elaborate barn or a lot of fancy equipment. The most important factor is the dairyman himself. It is the dairyman that does the feeding, milking, cooling the milk, and cleaning the utensils. If he is interested in marketing a high quality product he can do so with simple inexpensive equipment and buildings, by following a few simple rules. If he is not interested in producing a quality product, all the equipment and rules in the world will not make him a good milk producer.

Assuming that a barn and milk room that can be kept clean with reasonable effort has been provided, the following equipment is necessary in the production of high quality milk: (1) an ample water supply that is accessible, safe and protected; (2) facilities for making steam or ample hot water; (3) a chemical disinfectant; (4) handwashing facilities including soap and clean towels; (5) buckets and cloths to be used for washing the cow's udder and teats and for wiping the flanks; (6) cans, a strainer, and smooth soldered, seamless, small top milk pails; (7) filter disks; (8) adequate cooling and storage facilities; (9) a thermometer; (10) brushes and metal sponge; (11) dairy (scapless) cleaners; and (12) metal racks for storage of utensils and cans.

It is essential that a good routine be observed every milking. The following is recommended:

1. Rinse all cans, buckets, strainers and coolers with a chlorine solution (200 p. p. m.) just before milking. This is advisable even though the equipment was sterilized immediately after it was washed. The chlorine rinsing method has proved to be effective for sterilizing clean equipment. It is of no value on unclean equipment. To be effective, the chlorine solution must come in contact with all milk surfaces. A practical way to do this is to place the solution in the holding tank above the cooler and allow it to flow over the cooler into the trough, thence thru the strainer and into a milk can. Then the lid is placed on this can, and the can is shaken to bring the solution into contact with the entire inner surfaces. Rinse the other cans to be used at that milking, as well as pails with this same solution. Save the solution for washing the cows' udders and disinfecting the milker's hands.

2. Brush or wash any visible dirt and manure from the cow's belly, flank and tail before milking. Then wash the udder, teats and flank with the chlorine solution using a cloth. The smallest speck of manure or dirt that falls into the milk may add millions of bacteria to it. Once this material is in solution all the filtering in the world will not remove the added bacteria. Disinfecting the udder not only aids in the production of clean milk; it helps in preventing the spread of udder infections; and if done just before milking each cow, disinfects the milker's hands.

3. Cool the milk promptly after milking. From the standpoint of bacterial count, which is one excellent measure of quality, thorough cleansing and disinfecting of all milk utensils and cooling of the milk are the two most important factors.

The following table shows the importance of effective cooling and storage temperatures:

Temperature of Storage	Bacterial Increase During 12 Hours Storage
40°F	No increase
50°F	Slight increase
60°F	15 fold increase
70°F	700 fold increase
80°F	3,000 fold increase

From the above, it is evident that milk cannot be safely kept at much above 50° Fahrenheit. Cooling milk promptly after milking is also important. If a surface

cooler is used, and the milk flow over it is properly regulated, the maximum degree of cooling may be secured almost instantaneously. If the milk is to be cooled in cans, the water in the refrigerator should be above the level of the milk in the cans, the cans should be spaced in the cooler so that the water can move freely around each can, and the water should be stirred until the milk is cool.

4. All milking machines, buckets, cans, and coolers should be cleaned immediately

after completion of milking in the following manner: (a) rinse with cold water; (b) scrub with stiff brush or metal sponge in warm water (120° F) using a soapless cleaner; (c) rinse and sterilize by an approved method; and (d) store in an inverted position on a metal rack and let remain inverted until next use.

The producer should be made aware of the fact that there are no short cuts in quality milk production, and that the public is entitled to quality milk every day.

AMERICAN MEDICAL ASSOCIATION NEWS

WAGNER REPLIES TO JOURNAL'S ATTACKS ON SOCIAL SECURITY

U. S. SENATOR'S STATEMENTS PERTAINING TO MEDICAL ASPECTS OF PROPOSED MEAS- URE BRING REPLY FROM EDITOR

The Journal of the American Medical Association of June 30 publishes a letter from U. S. Senator Robert F. Wagner, together with comments by the editor, relative to the proposed Wagner - Murray - Dingell bill, which would expand the Social Security Act to include a vast program of medical care and hospitalization insurance. Senator Wagner's letter, addressed to Editor Morris Fishbein, M. D., is in reply to an editorial which appeared in The Journal on June 2.

"In the last paragraph of your editorial," Senator Wagner said, "it is stated that I have 'not consulted with the American Medical Association.' The fact is that I *did* consult the American Medical Association. On Dec. 7, 1944, I addressed a letter to Dr. Olin West, Secretary and General Manager of the American Medical Association, listing a series of suggestions for the revision of the 1943 bill and inviting the Association to comment on these proposals."

In a reply addressed to the editor, Dr. West explained:

"I informed Mr. Wagner that I did not feel that I was in a position to enter into a discussion 'of the proposals for changing and broadening the health provisions of the Wagner-Murray-Dingell bill,' since any comment that I might be disposed to offer would be purely in the nature of personal opinion. I stated that the House of Delegates of the American Medical Association is its

policy making body and that only the House of Delegates is in a position to commit the American Medical Association with respect to legislation of such great importance to the public and to the medical profession as the Wagner-Murray-Dingell bill. I informed Mr. Wagner that a copy of his letter addressed to me had been sent to the elected officers of the Association . . . It did not occur to me that Mr. Wagner intended that his letter should be considered as a request for a statement representing the policy of the American Medical Association, and even had I believed his letter to be of that nature, I should not have presumed to speak for the Association. The letter merely asked for comments on certain proposals; it did not suggest or invite a conference."

Continuing, Senator Wagner's letter said in part:

"On numerous occasions over the past 10 years the American Medical Association has been urged to put forward constructive proposals to deal with admitted needs for health and medical services in the United States . . . and the Association has condemned every proposal which had a chance to deal with our large national needs on an adequate basis."

Replying to this portion of the Senator's letter, Dr. Fishbein said:

"Senator Wagner and the representatives of the Social Security Board have queer ideas of consultation and cooperation. From the first they have insisted on federal compulsory sickness insurance as the only answer to the problem of medical care. They refuse to listen to any other proposals or to

modify in any way the proposals developed through the Social Security Board and introduced by the Senator."

In another portion of his letter, Senator Wagner emphasizes that the bill specifically provides that an unemployed worker is disqualified from receiving his benefits if he refuses to accept suitable employment. "You also repeat the error," the Senator's letter said, "that 'the old age benefits in some instances would pay a man more for retiring than for continuing at his job.' The fact is that our bill includes the 80 per cent maximum contained in the present law, and that a man cannot receive as much on retiring as he has ordinarily earned in covered employment."

To this, the editor of The Journal replied: "Expert economists and accountants are having difficulty in interpreting the Senator's estimates and his tables. In the Congressional Record, May 28, 1945, page 530, he himself introduced some corrections of errors in his tables. Practically all authorities are convinced that the sums to be spent under this bill are far beyond the eight per cent tax on the payroll that the bill proposes. This the Senator freely admits, stating that the total amount will be made up from general taxes. Referring specifically to Senator Wagner's comments . . . is it not the maximum government control over the individual to suggest that a worker will not be entitled to his benefits under unemployment insurance unless he takes a job that a federal government agency offers him? Will the workers of this country be willing to accept that type of dictation?"

In closing, Senator Wagner commented on the last sentence of The Journal's editorial. "You refer," he said, to 'obstinacy' typical of the manner in which my colleagues and I have tried 'to impose their notions regarding the care of the public health and the sick on the people of the United States.' . . . It is evident from the results or numerous polls and from the many thousands of letters written to me and to my colleagues that the American public is in favor of health insurance. I feel that the American Medical Association has the opportunity to render a great public service in this field. I hope that instead of pursuing a negative policy you will join with those of us who are trying

to find constructive solutions to one of America's basic problems."

Dr. Fishbein, pointing to the work which has already been carried out by the American Medical Association on voluntary health insurance proposals, replied that "various state and county medical associations are now participating in trials of various techniques with the hope that suitable methods can be found," and added: "This is the very opposite of obstinacy. Senator Wagner and the Social Security Board, however, have never admitted any possible answer to the problem of medical care except a federal compulsory sickness insurance system. This is the apotheosis of stubbornness and obstinacy and with it a complete lack of willingness to confer, to consult or to reason."

SKIN GRAFTING IN HEMOPHILIA

Two Boston physicians—Charles S. Davidson and Stanley M. Levenson—report a successful skin graft operation on a patient with hemophilia in the June 30 issue of The Journal of the American Medical Association. They controlled the bleeding by applying a mixture of powdered sulfanilamide and thrombin, the enzyme which is responsible for the coagulation of the blood.

EXPERIMENT IN JOB PLACEMENT WILL HELP DISABLED VETERANS

COUNCIL ON INDUSTRIAL HEALTH SUPPORTS PLAN WHEREBY RIGHT MAN AND RIGHT JOB WILL BE BROUGHT TOGETHER

The Council on Industrial Health of the American Medical Association has announced that it will shortly sponsor a controlled experiment in selective job placement in cooperation with the Veterans Employment Service and the Occupational Analysis Division of the War Manpower Commission.

Selective placement of workers in accordance with their physical capacities has been practiced by private industry for some time, but the program is becoming more important now with the return of many disabled service men.

"As the rehabilitation program unfolds," says the June 30 issue of The Journal of the American Medical Association, "medicine must assume responsibility for competent

treatment and reconditioning, followed by placement in occupations based on a medical evaluation of residual ability rather than disability. From the latter concept selective placement has emerged. Selective placement demands the matching of the physical, mental and emotional capacity of an individual, his intelligence, talents, skills, experiences, desires and motivations with the technologic and physical demands of a given job."

Industrial physicians believe that if a person is able to meet the job requirements and perform his work in a normal and satisfactory manner, he is not a handicapped worker on that job, regardless of the serious nature of his physical or mental limitations, deficiencies, or impairments.

A successful job placement program, they point out, is dependent upon three main factors: 1. The accurate determination of the individual's physical and mental abilities and disabilities; 2. A careful analysis and description of the characteristics and physical demands of specific jobs; and 3. The skillful matching of the individual's physique, aptitudes, skills, interests and attitudes with the requirements of the job.

The A. M. A. Council on Industrial Health says that ultimately the jointly sponsored experiment will extend to various kinds and sizes of industrial plants and to normal as well as subnormal workers. Commenting on the placement plan, The Journal says:

"Any procedure which brings the right man and the right job together appeals to industry as a desirable objective from the varying points of view of human relations, health, safety and production.

"Selective placement expresses capacity for work in terms of ability rather than disability. The medical profession has struggled endlessly with efforts to define and determine disability. Methods have not yet been devised which do not yield wide variations in interpretation by different individuals. Percentage determination of disability has led to flagrant abuses in claim adjudication both in workmen's compensation affairs and in common law. The more positive approach which evaluates what a man has left rather than what he has lost should appeal to physicians as more amenable to logical and scientific appraisal.

"Of the two major programs in rehabilitation, veteran reemployment still over-

shadows the activities of the state rehabilitation agencies now developing under theegis of the federal Office of Vocational Rehabilitation. Many industries, recognizing their obligations for veteran reemployment under the Selective Service and Training Act of 1940, have developed comprehensive procedures which include medical examination and placement. A feeling is growing, however, that reemployment of veterans is a community responsibility requiring participation of all social agencies as well as employers. Just what will be expected of the medical profession under such an arrangement is not altogether clear. Employers will however be interested in pre-placement physical appraisal of disabled veterans. The Committee on Rehabilitation and Employment of the Council on Industrial Health is developing a series of recommendations about veteran reemployment for the guidance of physicians and medical organizations. The procedure which is being developed will avoid duplication of physical examinations either through central registration in a community reemployment center or by means of a card issued to the worker bearing essential data, which can be presented at the time of any interview."

SINGING NOT ADVISED FOR PERSONS WITH ARRESTED TUBERCULOSIS

Is singing advisable for a person who has a moderately advanced case of tuberculosis? The answer is definitely no!

In reply to this query, the July issue of Hygeia, The Health Magazine, advises against the extra strain that professional singing may put upon the lungs with healed lesions. Because rest is so important for the sick lung, the treatment of pulmonary tuberculosis usually involves pneumothorax—in which the lung is artificially collapsed and immobilized for healing. Possible reactivation by overloading already weakened lungs with an extra amount of work and strain would be tempting fate.

"The plea that many people with weak lungs study singing with the object of strengthening their lungs hardly applies here," the Hygeia article says. "Many of these people presumably had healthy lungs to begin with and have no trouble. On the other hand, if there is some weak spot in the lungs, the singing might possibly be the last straw."



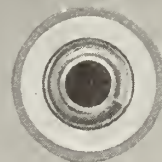
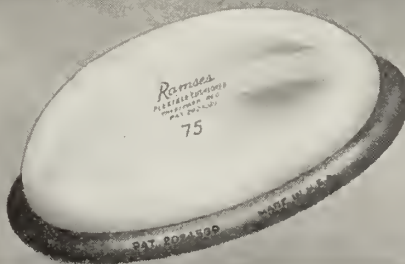
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Miscellany

TESTS ON NEWBORN BABIES SHOW THEIR IMMUNITY TO MANY GERMS

BELIEVE MUCOUS SURFACES OF THROAT AND NOSE DO NOT PROVIDE IDEAL CONDITIONS FOR GROWTH

During the first 24 hours of life, a baby usually exhibits a relative intolerance for many types of germs, John C. Torrey, Ph.D., and Martha K. Reese, M. D., found in studying cultures taken from the throats and noses of 105 full term infants in the obstetrics division of the New York hospital.

Their report, appearing in the current issue of the American Journal of Diseases of Children, said that failure of the germs to gain a foothold was "due not so much to inherited antibodies in the secretions of the nose and throat as to the fact that the immature state of these mucous surfaces does not provide the physical and nutritive conditions necessary for their growth and metabolism."

Cultures were made of material from the throats and noses of 105 infants. No bacterial growth was obtained from the swabbings within four hours after birth in 95 per cent of the group studied. Cultures from infants 13 to 18 hours old indicated continued freedom from micro-organisms of the nose in 31 per cent and of the throat in four per cent,

but by the end of the first day the cultures of all infants yielded growth from both regions.

After the first few days of life, several kinds of bacteria, including streptococci, were found to have invaded the throats of many of the babies. The highest percentage of germs—88.8—was found between the fourth and eighth day.

While pneumonia germs were occasionally cultured within a few days after birth, they soon disappeared from the throat and nose secretions. The mucous membrane of the throat and nose of the newborn infant is unreceptive to many of the germs which thrive there later in life.

"It has been demonstrated," the report said, "that the routine wearing of conventional face masks by persons engaged in the care of newborn infants is not an important preventive measure against transfer of respiratory organisms to the infants. Their value is further minimized by the fact that the types ordinarily employed cannot be depended on to retain mouth droplets carrying bacteria."

Although the nursing mothers did not wear face masks, not a single infant in contact with them was infected with pneumonia germs from that source, although 17 of the mothers were known to be carriers. The three infants who yielded positive cultures acquired the pneumonia germs from other sources, presumably from other persons wearing face masks or, less probably, indirectly, through dust laden air, the investigators said.

"Our bacteriologic findings," their report said, "seem to indicate that this age group is less in need of special measures to protect them against acute infections of the respiratory tract than are infants several months older."

DOCTOR TELLS HOW INSECT REPELLENT LOTION NEARLY COST BOY'S LIFE

How an insect repellent lotion nearly cost the life of a three year old boy is related by David Hoehn, M.D., of Palmer, Alaska, in the June 16 issue of The Journal of the American Medical Association.

The boy was admitted to the hospital with acute kidney disease which brought on severe swelling in the lower extremities.

"The child had always been well," the physician said, "and the fact he was taken seriously ill so suddenly made me think that he might have ingested some toxic substance which caused the kidney damage. The mother received information from a friend that an insect repellent had been banned for use in the Army because it might be harmful. She admitted that they had used this lotion very freely on the child's skin during the summer."

Dr. Hoehn and the consulting physician, Capt. H. A. Zimmerman, of the Army Medical Corps, said that they both felt the boy's disease had been caused by the insect repellent.

Tests done by the Committee on Medical Research and the Office of Scientific Research and Development showed that the repellent lotion was a severe kidney and liver poison to rabbits.

The child gradually became worse, the doctor's article said, and for a time his "condition became extreme and it looked as though he would not live more than a few days." He was given a number of blood transfusions and his condition improved.

"At the present time," Dr. Hoehn wrote, "the child is in fairly good condition. . . . Undoubtedly his life expectancy has been considerably shortened, and the danger of recurrence of the disease is imminent.

"My purpose . . . is to show the possibility of the danger from the unrestricted use of insect repellents. The Federal Food, Drug and Cosmetic Act does not cover insect repellents and therefore the Food and Drug Administration does not have any jurisdiction over this type of product. It seems that there should be some type of restriction so that indiscriminate use would be warned against. Proper legislation would enable the Food and Drug Administration to have administration over repellents so that such incidents would not be repeated.

If the people were warned not to use such a substance freely, and especially not to use it in the presence of a skin rash, I believe such unfortunate occurrences could be prevented."

DOCTOR CITES TWO CASES OF MALARIA CONTRACTED FROM EX-SOLDIER

That the spread of malaria to civilians in wartime may have distinct possibilities is pointed out in the June issue of The Journal of the American Medical Association.

S. B. Osgood, M.D., of Grants Pass, Ore., reports two proved cases of malaria, and possibly a third, which were contracted from a returned soldier having chronic malaria. This occurred in a rural area entirely free of this disease as far back as official medical records are available. The existence of anopheline mosquitoes, the carriers of the malaria blood parasite, had not even been suspected before the occurrence of these cases.

When anopheline mosquitoes feed on a person whose blood contains the malaria organism, these are drawn with the blood into the insect's stomach. There the parasites undergo certain changes, and after a week or so produce a number of spores. The spores find their way into the insect's salivary glands and when the mosquito next bites another person, it injects the spores, together with its saliva, under the skin and into the blood—thus infecting the second person with malaria.

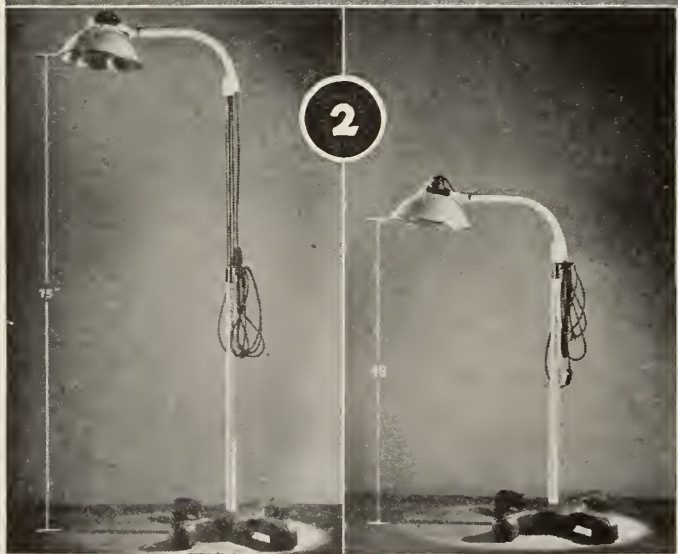
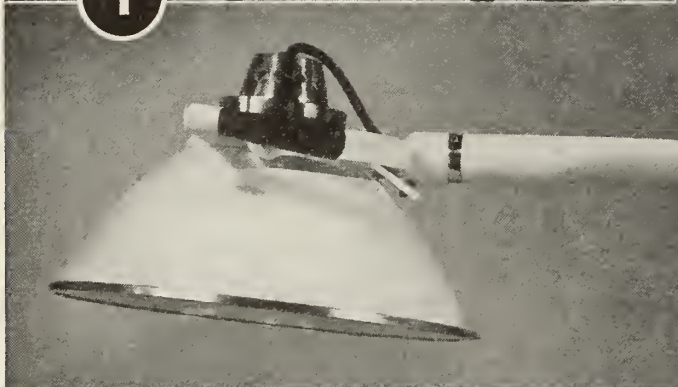
In this way, the returned soldier, who had contracted malaria in Australia, became the source of infection of the two Oregon patients. He lived on the bank of Grave Creek and the two patients lived nearby, within the flight range of anopheline mosquitoes. Anophelines were identified among mosquito specimens collected in their homes for investigation.

"It would appear," Dr. Osgood states, "that careful mosquito surveys must be made in this and other districts where climatic conditions permit the existence of anopheline vectors [carriers], and that active mosquito control measures must be instituted if an increased incidence of malaria and its establishment in new endemic [local] areas is to be prevented."



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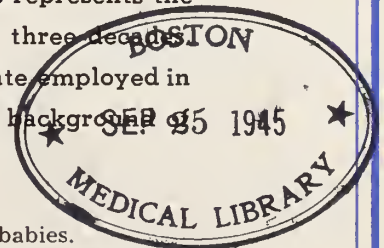
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PREGNANCY COMPLICATING CHRONIC CONDITIONS

ORMOND R. GRIMES, M. D.
Gadsden, Alabama

Generally, when a pregnant woman has heart disease, pulmonary tuberculosis, diabetes or other ailments, physicians speak of the disease as complicating pregnancy. Actually the pregnancy and not the medical illness is the complicating factor. In nearly all of these cases, the disease was present before gestation began. This point of view is important because on it depends the proper conception of treatment. Thus, in nearly all cases of serious medical ailments in pregnant women, it is advisable to treat the illness and disregard the pregnancy. Only a few illnesses will be discussed here; namely, cardiac disease, pulmonary tuberculosis, syphilis, diabetes, thyroid disease and secondary anemia. In most cases, when a general practitioner encounters a pregnancy associated with a serious medical ailment, he should call a medical specialist in consultation.

HEART DISEASE

During pregnancy there is not only hypertrophy of the heart but also an increase in the cardiac output and a diminution in cardiac reserve. About 10 to 20 per cent of pregnant women have systolic murmurs, but most of these are functional and have little significance. Real heart disease occurs in about one per cent of all pregnant women. In most instances, pregnancy has no deleterious effect on the heart condition. However, if a woman has a serious form of heart disease and has had decompensation before pregnancy, the gestation will almost surely aggravate the cardiac condition.

Labor is especially dangerous, but if a patient has gone through pregnancy without any serious disturbances she will usually have an uncomplicated delivery. However, in some cases, cyanosis, pulmonary edema, collapse and death occur immediately after delivery, especially in decompensated cases.

Prognosis: The prognosis in most cases is good. First, most women with valvular lesions feel so well that they are unaware of the cardiac condition. Second, pregnancy seldom endangers patients with mild heart disease. Third, with improved medical care, obstetric patients can be carried through pregnancy and labor with a minimum of danger. Regardless of all this, pregnant women should be watched closely all the time, because the disease is treacherous. Heart disease is responsible for 5 to 8 per cent of all maternal deaths.

Treatment: A woman who has valvular disease but has never had decompensation may safely marry, but one who has had a serious myocardial affliction and has periods of decompensations should not marry unless she and her husband are willing to forego having children. A pregnant woman with heart disease who develops any untoward symptoms should be put to bed immediately. In most cases the symptoms will subside. Treatment depends on the functional capacity of the heart. The important principles in the treatment of pregnant women with cardiac disease are *adequate rest and avoidance of respiratory infections, overwork and worry*. Frequent examinations are necessary to detect early signs and symptoms of heart failure. Should such signs

appear, the patient must be put to bed. During labor cardiac patients must be guarded closely, even those who are compensated. If possible a cardiac patient should be hospitalized about a week before labor is expected. During this time, and also during labor, she should be placed in a semirecumbent position with the head and shoulders elevated on pillows. During labor she should be given rest by means of morphine. Digitalis may help. If the pulse rate rises above 110, the patient must be closely watched. Preparations should be made *early* in labor so that *immediate* delivery may be accomplished if this becomes necessary. Cardiac stimulants, oxygen and instruments for venisection should be close at hand. When dilatation of the cervix is complete and the fetal head reaches the perineum, the child should be delivered by low forceps, preferably with an episiotomy. Ether or local anesthesia should be used. Personally I prefer local infiltration, and only small amounts of ether. The patient should not be encouraged to strain or bear down an excessive amount. In many cases cesarean section is the method of choice, but Greenhill says the patient must never be placed in a Trendelenberg position. During decompensation, no form of delivery should be carried out. Only medical treatment is indicated.

PULMONARY TUBERCULOSIS

There is no unity of opinion concerning the effect of pregnancy on pulmonary tuberculosis. Some authorities maintain that gestation usually aggravates phthisis while others believe its course is not adversely influenced by pregnancy. The former group advises termination of pregnancy before the *fourth* month, and the latter has statistics to show that tuberculous women go through pregnancy without mishap and live as long as women who have no pregnancies. I shall never forget a colored patient I had several years ago who had active pulmonary tuberculosis. She was running fever, losing weight and had a positive sputum and x-ray. I had warned the husband as to the possible outcome should his wife become pregnant. Nevertheless she came to me in due course about four months pregnant. I had the husband properly prepared for the loss of his wife, advised him about his five other children, and rather caustically blamed him for

the whole situation. She was sent to a sanatorium, came back, delivered the baby, looked fine, had no fever, stayed obese, never was sick again, and has since borne another child. I saw her the other day, and she is still in good condition. I do not say that the pregnancy cured the tuberculosis, but pregnancy and tuberculosis, *treated tuberculosis*, are not as incompatible as we once thought. Women with latent or healed tuberculosis may safely bear children, but they should be carefully examined by an internist before they decide to become pregnant.

Treatment: The treatment of tuberculosis, complicated by pregnancy, varies with the degree of pulmonary involvement. Prophylactically, it is best to advise girls with active pulmonary tuberculosis not to marry, and, if they do marry, not to bear children. If a woman has healed tuberculosis she is usually able to go through pregnancy without trouble. A useful aid in the treatment of pregnant women with active tuberculosis is collapse therapy. Ornstein and Epstein used collapse therapy in 82 tuberculous pregnant women and reduced the mortality to 12.2 per cent. They believe pregnancy has *no influence* on the course of pulmonary tuberculosis. J. P. Greenhill of Chicago states that if a patient with active tuberculosis becomes pregnant, therapeutic abortion is not indicated. He maintains that with proper care the patient can go through her pregnancy unharmed. The second stage of labor should be shortened by low forceps. Local infiltration anesthesia should be used. No inhalation anesthetics are permissible. The patient must be carefully watched through the puerperium. The child should not be brought in the mother's room and should be separated from her entirely for several months, or until there are no signs or symptoms of the disease. The patient should use contraceptives until she is cured of the tuberculosis because each additional pregnancy may aggravate the pulmonary condition more and more until, after one of the labors, she declines rapidly.

SYPHILIS

Syphilis is much more prevalent than most individuals believe. Only routine Wassermann and Kahn tests will reveal its true incidence.

The effect of syphilis on pregnancy differs according to whether the disease is contract-

ed before conception, at the time of impregnation, or during pregnancy. If the patient has syphilis before she becomes pregnant, she usually expels a macerated fetus in the latter months of pregnancy. Syphilis is rarely responsible for abortions in the early months of gestation.

If the woman contracts syphilis at the time of conception or just before it, the child is always syphilitic, and unless treatment is instituted early and intensively it is usually born prematurely.

If the woman is infected after impregnation, the condition of the child at birth depends on the month of gestation when syphilis was contracted. If syphilis is contracted before the fifth month, the child usually has syphilis, but if the disease is contracted after this time the child is frequently healthy.

Labor is seldom complicated in women with syphilis. In untreated patients, the fetuses are either macerated or puny. During the puerperium, morbidity may be higher than it is among other women.

Treatment: The ideal prophylactic measure is to have a blood test for syphilis made as routine on every patient who applies for antepartum care, regardless of whether she is a charity patient or whether she comes from the most elite family.

The cardinal principle is to treat a woman who has syphilis as soon as the disease is discovered, regardless of the duration of the pregnancy. The earlier treatment is instituted the better, and it must be continued throughout the entire period of gestation.

In non-pregnant women early syphilis is treated by giving about three injections weekly. Two of mapharsen and one of bismuth, for eight weeks, usually suffice. However, in the pregnant patient it is the belief and advice of the U. S. Public Health Service that the patient should have an injection each week throughout the pregnancy. It is also advisable to treat any women who has ever had syphilis, regardless of the serology, at weekly intervals through every subsequent pregnancy. This must be done regardless of whether the patient received treatment before she became pregnant.

Needless to say, Wassermann or Kahn tests should be made at frequent intervals after labor, and treatment should be continued. A woman should not be considered cured until the Wassermann or Kahn re-

action has remained negative for at least one year after the last treatment.

DIABETES

The association of diabetes and pregnancy is unusual. This is unfortunate inasmuch as diabetes produces (1) accidents to the fetus, (2) maternal toxemia and eclampsia, (3) maternal coma and (4) maternal hypoglycemia. In White's series of 271 pregnancies in 191 women, only slight improvement has been noted during the last few years despite the use of insulin.

A surprising fact is that toxemia and eclampsia occur nearly 50 times more frequently in the diabetic woman than in the non-diabetic child-bearing population at large. This relationship is most likely hormonal.

In general it may be said that the outlook for pregnant diabetics is much worse than formerly, but that it is probably best for a woman with a history of true diabetes to forego pregnancy.

The Risk To The Fetus: The failure of insulin to influence materially the fetal and neonatal mortality in diabetes is a well recognized fact. As Davis states: "While there has been a gratifying decrease in maternal morbidity and mortality, the risk remains high, and the fetal mortality is very high." Miller et al. place the fetal and neonatal mortality at 30 per cent and point out that severity of the disease has little bearing on the mortality rate. Abortion is a relatively common occurrence, and in a large series of cases at the Joslin Clinic the incidence was 16 per cent.

Heridity Transmission of Diabetes: Diabetes is believed to be inherited as a Mendelian recessive trait. This factor, according to Beck, "deserves important consideration whenever a woman with diabetes consults her physician concerning the advisability of her becoming pregnant." In this connection, Davis states that "the risk of child bearing from the standpoint of transmission of the tendency to the disease is acceptable only if one parent is free from diabetes and knows of no diabetes in his heredity."

Should Diabetics be Advised to Conceive? Authoritative opinion, based upon consideration of risks involved to the mother and fetus, and the possibility of inheritance of the disease, indicates that pregnancy in diabetics is generally contraindicated.

The temporary unfavorable effects of pregnancy on the course of diabetes are (1) change in tolerance for carbohydrates, (2) lowering of the renal threshold, (3) predisposition to coma, and (4) predisposition to hypoglycemia.

Treatment: The treatment of diabetes during pregnancy varies with the individual patient and the trimester of pregnancy. In the first trimester, treatment is directed to the dietetic control of nausea and vomiting, readjustment of the diabetic regimen, and accurate control of the diabetes. In the second trimester there is a low renal threshold and an increased requirement for food. The changes in insulin requirements must be based on blood sugar analyses rather than on urinalyses. In the third trimester the chief concern is the possible development of acidosis.

Labor increases the complications of the third trimester, increases the depletion of glycogen, and raises the basal metabolic rate. If the patient is to have an abnormal labor, she is a potential coma case. The carbohydrate intake should vary from 150 to 300 mg., with large quantities of fluid. If the patient is delivered by cesarean section, the blood sugar values should be maintained between 150 and 200 mg.

Thus, during pregnancy, the diabetic is a candidate for coma in the first trimester, hypoglycemia in the second trimester, acidosis, toxemia and hypoglycemia in the third trimester, and, if she has an abnormal labor, the danger of coma is great.

Another problem of diabetic pregnancies is failure of lactation. Puerperal sepsis is rare.

General Recommendations: 1. Pregnancy in diabetics should definitely be discouraged. 2. The young diabetic, greatly desiring a child, may be permitted to have one or at most two pregnancies. 3. Adequate instruction should be given the diabetic patient in the technique of conception control and appropriate child spacing.

Delivery depends on clinical and hormonal behavior. Cesarean section is favored in the abnormal group, normal delivery in the normal group.

HYPERTHYROIDISM

During pregnancy the thyroid gland produces an increased amount of secretion, hence there is an increase in the basal met-

abolic rate. True hyperthyroidism in pregnancy is rare because this disease is usually associated with sterility. Few of the pregnant women who had hyperthyroidism observed at Mayo clinic gave evidence of spontaneous improvement in the course of pregnancy, nor did pregnancy render the control of exophthalmic goiter more difficult.

Hyperthyroidism during pregnancy carries an increased hazard which seems to be proportionate to the degree of hyperthyroidism. When the metabolic rate rises unduly and the patient becomes seriously ill, abortion is likely to occur. Among adequately treated patients whose hyperthyroidism is not too severe, the fetal risk is not much greater than in the average pregnancy.

Treatment: Hyperthyroidism is practically never an indication for therapeutic abortion because abortion does not cure hyperthyroidism. Not only will the abortion do no good but it may precipitate a hyperthyroid crisis or subsequent infection.

The hyperthyroidism of exophthalmic goiter can be controlled, at least temporarily, by iodine. In mild cases in which the hyperthyroidism is not well controlled and in severe cases following temporary control, a subtotal thyroidectomy is done.

Improvement during pregnancy can be obtained by the administration of 10 drops of compound solution of iodine (Lugol's solution) orally three times a day. The patient can usually be carried through pregnancy on this medication. However, basal metabolism studies must be made repeatedly. If the exophthalmic goiter does not give evidence of complete or nearly complete remission within two weeks after treatment with iodine, partial thyroidectomy should be performed. If there is improvement the patient can be carried to term comfortably. However, during labor the patient should not be permitted to bear down because this not only adds to the strain of an overworked heart but also increases the size and vascularity of the thyroid gland. Furthermore, the pains of labor act as a kind of shock and hence should be avoided as much as possible by means of analgesia and anesthesia.

Lactating mothers who have hyperthyroidism do not progress favorably unless nursing is discontinued. The patient is already suffering from a high metabolic rate, and an additional drain on the body is con-

traindicated. Furthermore, since the mother's milk is contaminated with the toxins of Graves' disease, the baby will be better off not nursing at the mother's breast. Repeated pregnancies in close succession in the presence of Graves' disease are usually harmful. At least two years should elapse between pregnancies.

ANEMIA

Secondary anemia is one of the most common and yet one of the least considered ailments of pregnancy. Nearly all pregnant women have some degree of anemia. There is no other system that is called upon for as much increased activity as the hematopoietic functions of the pregnant woman. It is my belief that every pregnant woman should have antianemic treatment, especially in the last trimester, unless it is proven she does not have anemia. I believe that the pregnant woman should have a hemoglobin and a red blood count on every prenatal visit. In support of this contention red blood counts were taken on 100 consecutive admissions of obstetric cases to the Holy Name of Jesus Hospital, Gadsden, and the cases were classified under the following headings: (1) normal blood count, $4\frac{1}{2}$ to 5 million; (2) mild anemia, 4 to $4\frac{1}{2}$ million; (3) moderate anemia, 3 to 4 million; and (4) marked anemia, below 3 million. There were 8 normal blood counts out of the 100, and only one of those was as much as 5 million. Under the second or mild group of anemia, between 4 and $4\frac{1}{2}$ million, there were 45 cases. In group 3, between 3 and 4 million, there were also 45 cases of moderate anemia, or nearly half of the total. Under number 4, or those between 2 and 3 million, there were 2 cases. Generally speaking, the hemoglobin ran correspondingly. However, it was particularly noticeable that the hemoglobin and red count did not always correspond. This warns us that a hemoglobin alone is not sufficient. This proves rather conclusively, I believe, that we are not doing our patients justice when we allow them to approach one of life's greatest ordeals and hazards with lowered resistance which we could largely prevent. A pregnant woman's resistance to possible infection, toxemia, and exhaustion is usually directly proportional to her red blood count.

I think it behooves all of us, therefore, to consider the red blood count and hemoglobin

determinations to be as necessary routine procedures as the blood pressure and urinalysis.

Treatment: The treatment of secondary anemia is much more difficult in pregnant patients. They do not respond as well as the non-pregnant. Gastric analysis often shows a lowered hydrochloric acid content associated with the anemia. Some of the stubborn anemias will respond when hydrochloric acid is administered along with liver, iron and vitamins. Several of the better known drug houses put up 10 minim capsules of hydrochloric acid for this purpose.

In closing, I should like to say that obstetricians, as well as general practitioners, should look upon pregnancy as one of the most serious and potentially dangerous periods of a woman's life. We are too prone to consider the average pregnancy as a normal patient. It is this lethargy and inattention to the little danger signals that help to make our State one of the worst in the Union in regard to maternal mortality. The sooner we realize this and remedy it the more mothers we shall save.

Sinus Disease in Childhood—The most frequent symptoms and signs of sinus disease in children, as in adults, are nasal and postnasal discharges, rhinitis, coughs, hoarseness, headache, local discomfort, and otitis media. Mouth breathing may be either a cause or an effect. General symptoms include failure to gain weight, irritability, restlessness, listlessness, malaise, anorexia and vomiting; many symptoms in this group are probably toxic manifestations of absorption from the foci of infection. While nephritis, pyelitis, chorea, arthritis and rheumatic fever are sometimes due to sinus disease, there should be due caution in attributing them to possible focal infection until every other cause has been excluded and the cause-and-effect relationship has been indubitably proved.

Sinus disease of allergic origin may be manifested by chronic nasal irritation without sneezing; frequent rhinorrhea; persistent sore throat without tonsillitis; "stuffy" ears without pharyngitis; chronic cough without bronchial infection, wheezing or dyspnea; and recurrent bronchopneumonia without identification of pneumococci. In allergic sinusitis there is almost always a magnification of symptoms which arise from acute blockage of the sinuses. If secondary infection occurs, the clinical picture does not differ from that of non-allergic sinusitis.—*Taquino, New Orleans M. & S. J., July 1945.*

GENERAL CARE OF THE INFANT DURING THE FIRST YEAR

J. H. BAUMHAUER, M. D.
Mobile, Alabama

This is indeed a broad subject and one on which much may be written. In the brief time allotted me it will be possible to cover only certain phases of the subject sketchily and hurriedly.

BREAST FEEDING

It must be remembered that the milk of every mammal is specific for its young. For this reason mother's milk is the ideal food for the infant. It supplies a great part of all the elements necessary for the first three or four months of life. It is warm, bacterial non-contaminated, and contains the essential food elements. However, even though the baby is breast fed, breast milk must be reinforced by the use of vitamins, fruit juice and iron at about the second month.

I am indeed sorry to acknowledge that there are entirely too few breast fed babies. This condition has resulted from several factors. One of these is the unwillingness of the mother and the nurse to train the baby to the breast. This takes time, effort and understanding. Another factor is that most mothers today are mentally upset and in poor physical condition at the time of the birth of the baby resulting in a poor supply of breast milk.

Most babies today are born in hospitals. These institutions are overcrowded and understaffed. The nurses do not care to be bothered with breast feeding. It is much easier to give the baby a bottle in the nursery, and thus the trouble of putting the baby to the breast is avoided. Most of the babies that I see have been weaned while in the hospital. Apparently it is not fashionable now for the mother to nurse her child.

During the first days of life the baby loses weight rapidly. This is caused by lack of fluids, the loss of body secretions, and the drying out of the tissues. If this dehydration continues, a condition known as inanition fever will result. This is prevented and remedied by the administration of fluids by mouth, and often parentally. I believe it

permissible to give the baby water or glucose water after the breast feeding when the breast milk is insufficient.

The baby should be put on the breast at three or four-hour intervals, but should not be starved into nursing the breast. There is no place in pediatrics for the so-called "alarm clock feeding" that was so popular a few years ago. Some babies will want to nurse every three hours, and some will probably do better on a four-hour schedule. Babies should be put to the breast when hungry, and allowed to nurse until they are apparently satisfied.

FEEDING DURING THE FIRST YEAR

Orange juice or ascorbic acid should be started early. In artificially fed babies I order it as soon as I see the baby. Cod Liver Oil Concentrate in doses of five to ten drops a day should also be given at this time. Cereals are added from the second to the fourth month depending on when the swallowing reflex of the baby develops. I use, as a rule, the precooked cereal products, and mix them with one portion of this cereal to two parts of a prepared formula. This is given at the 10:00 A. M. and 6:00 P. M. feedings, and the amount is gradually increased until the baby gets $\frac{1}{2}$ to 1 cup at each feeding. Strained vegetables are added at the fourth or fifth month. The amount is one teaspoonful and this is gradually increased until the baby gets an entire can at each feeding. Baked Irish potato and well cooked strained rice are added at about the sixth month. An egg is usually given between the third and sixth month. Soft boiled (3 minute) eggs are preferred. This is added at the 2:00 P. M. feeding. Only a small amount is given at first and this is gradually increased until the entire egg is taken once each day. Meat in the form of broiled fish, liver or chicken is added about the sixth month. This is finely divided and mixed with the vegetable.

WEANING

The baby should be weaned from the ninth to the twelfth month, and gradual weaning is recommended. There are some physicians

who advocate giving the baby the bottle until the age of two years. They claim that should the baby become ill and the necessity of administered fluids become imperative the child will take the fluids from the bottle when he will balk at a cup or spoon. No one, I believe, advocates continuing the breast after the baby is one year of age. I feel that even though breast fed and the mother has an adequate amount of breast milk, the baby should be taught at an early age to take fluids out of a bottle, cup or spoon. I see quite a number of infants who refuse everything but the breast when they are seriously ill and require hospital care. The mother is upset and as a consequence her milk supply diminishes. Had these babies been taught to nurse a bottle or take fluids from a cup or spoon the development of dehydration would have been averted.

UNDERFEEDING

I should like to discuss with you in brief a few of the nutritional disturbances that we are called on to treat. The first of these is underfeeding. Naturally these babies do not gain in weight. If the baby is breast fed he will fight the breast. He does this because he knows there is no reason for him to try to get milk out of an empty breast. His stools are green and slimy. This condition very frequently misleads the physician who orders daily doses of castor oil and the forcing of certain waters. This does not help the diarrhea, and the mucus in the stools continues. It is important to remember that the underfed baby frequently vomits and if he is given some food this vomiting stops. Examination of breast milk is of no value. Normal breast milk is pale blue in color, and seems weak, yet babies thrive on it. In order to get an accurate examination the milk must be collected at mid-feeding, and not when the baby first nurses or the last milk or "stripping" is obtained.

OVERFEEDING

The baby who is overfed vomits a great deal. His gain in weight is too rapid. His skin is rough, oily and scaly. Usually his scalp and cheeks are covered with a crust. These babies very often develop diarrhea. The giving of calcium caseate before each feeding, if the baby is breast fed, and the lengthening of the interval of nursing will

correct this. If the baby is bottle fed, weakening the formula and diminishing the carbohydrate content will usually be all that is needed.

GASTRO-INTESTINAL INFECTION WITH DIARRHEA AND VOMITING

In the presence of a gastro-intestinal infection with diarrhea and vomiting it is necessary first to restore the body fluids and mineral salts. Hartman and his co-workers advocate a mixture of 10% glucose, 10% amigen, and 10% buffer salt solution to be given subcutaneously. This should be administered once or twice each day. This fluid supplies an adequate amount of sugar, protein and salt. It must be remembered, however, that the sulfa drugs cannot be administered in this fluid as a precipitate is formed.

The second thing of importance is to control the infection both enterally and parentally. This means that abscessed ears should be drained, throat infections should be cured, and pus conditions, such as generalized furunculosis, adequately drained. The third condition that must be met is the control of the gastro-intestinal symptoms of vomiting and diarrhea. This, of course, is helped by the administration of fluids subcutaneously. The giving of fluids in this manner, and the rest to the stomach by withholding fluids by mouth, help to control vomiting. However, small amounts of Coca-Cola in cracked ice may be given very early in these conditions, and this usually will be retained. Later on, other fluids, such as fruit juices and broth, may be given. The fourth thing that must be done is the restoration of the normal nutritional condition through an adequate diet. I find that powdered protein milk is a great value here. I start usually with a dilution of one tablespoon to six ounces of boiled water and the strength is gradually increased to three tablespoonsful to each eight ounces of boiled water. When the stools become firm, sugar is gradually added. Protein milk may be sweetened with saccharine and flavored with a few drops of vanilla extract.

EPIDEMIC DIARRHEA OF THE NEWBORN

I wish to discuss briefly two conditions which, although relatively rare, certainly deserve some consideration. The first of these is epidemic diarrhea of the newborn.

Neither its method of spread nor the organism causing it is known. The condition develops in overcrowded nurseries. In an epidemic, 15% of the babies in the nursery may be expected to have this disease and 50% of these will probably die. The disease seems to be especially fatal to weak and premature infants. These babies appear lifeless, usually vomit, develop diarrhea, and may or may not have elevated temperature. The stools are watery and yellow, with very little mucus being present. Blood and pus are conspicuous by their absence. In the treatment of this condition fluids should be administered subcutaneously or intravenously. Transfusions are also indicated. Sulfadiazine in large doses is the drug of choice as this condition is not entirely a local intestinal condition but is a generalized infection as well.

CYSTIC FIBROSIS OF THE PANCREAS

The other condition I wish to discuss is cystic fibrosis of the pancreas. It is a congenital disease characterized by the absence or gross deficiency of the secretion of the pancreatic juice with consequent poor digestion and absorption of starch, fat and vitamins. It results from the obstruction of the large and small pancreatic ducts.

Babies who have the disease are normal at birth and progress fairly well up until one or two months of age. Then they fail to gain weight. Their stools are large and foul smelling. Chronic bronchitis, broncho-pneumonia and often bronchiectasis frequently develop. Laboratory examination will reveal the absence of duodenal juices. The cholesterol is low. X-ray examination of the chest will reveal the typical chest pathology. While the laboratory examinations are corroborative they are not entirely necessary to make the diagnosis. It may be made clinically and treatment started. Pancreatin is administered by mouth, and the dose is 1 gm. for each 6 ounces of feeding. Adequate vitamin intake is most essential. Respiratory infections should be controlled. A no-starch, low fat, and high protein diet is given with its caloric content being 50% more than the caloric requirement.

IMMUNIZATION PROCEDURES DURING THE FIRST YEAR

No discussion on the general care of the infant during the first year is complete with-

out a few words concerning immunization procedures. Vaccination for smallpox should be done before the third month, and should be repeated before the child enters his first year of school. Vaccination should be done only in the winter months if possible. The multiple pressure method seems to be the one of choice.

Immunization for pertussis should be started between the sixth and seventh month. I use Sauer's double strength vaccine, 20,000 units per cc. It is given subcutaneously. The first dose is 1 cc. At intervals of one week the second and third doses of 2 cc. are given. Children over one year are given 3 cc. instead of 2 cc. for the third dose.

Diphtheria-tetanus toxoid is given at about the ninth month. The first subcutaneous injection is 1 cc. This is followed by the second injection of 1 cc. in the opposite arm in two to four months. Three to four months following the last dose of the toxoid a Schick test is done. It is read four to seven days later.

I do not advocate the use of scarlet fever immunization because of its severe reaction and because of the mildness of the disease in this locality.

The Evolution of Medicine—Had you been a student in Greece 500 years B. C., you would have grown up under the tutelage of the great Socrates, of Aristotle, or Plato. You would have learned history from Herodotus, you would have frequented the dramas of Sophocles and Euripides, and you would have thrilled to the great writings of Pythagoras. In fact you could have been given no more radiantly cultured era in which to live. It was among these great spirits that the father of medicine, Hippocrates, spent his life. He looked upon disease not with superstition but with a sane, wise judgment; he separated medicine from religion. "Disease," he said, "is a part of the order of nature, and to conquer it, one must study it as one does any other natural event." You would have been trained by a thoughtful, philosophical, methodical teacher had you followed in the train of Hippocrates. He would have taught you the quality of the pulse, the meaning of certain types of respiration; he would have stressed nourishment and diets, and the differences in the long thin and the short thick individual. He would have taught you to keep accurate records of the cases he treated, recording honestly his mistaken diagnoses as readily as his successes.—*Thompson, J. M. A. Georgia, July 1945.*

INTRAOCULAR STEEL PARTICLES

REPORT OF FIVE SUCCESSIVE CASES

GLENN STAYER, M. D.
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From the point of view of method in surgical means of removal, intraocular foreign bodies may be divided into two classes: magnetic and non-magnetic. Steel fragments constitute the great majority of intraocular foreign bodies. Gulliver reports a series of 1800 industrial cases of foreign bodies that he has treated; of these, all but ten were steel; among the ten were 3 copper, 3 glass, 3 lead and one stone. Others report series in which the number of steel foreign bodies ranges from 60 to 98%. As a result the giant magnet may be used in extracting the majority of these intruders. In Gulliver's series 85% were lodged in the posterior chamber, the remaining 15% being lodged in the anterior chamber, the lens or the iris.

A blow to a piece of steel by a hammer or a steel tool can cause a particle of metal to break loose at high velocity and penetrate the eyeball. The contact of metal in machines rarely causes intraocular penetration of a foreign body. One of the cases in my series was acquired by a blast of compressed air blowing fragments into the patient's face, one of which penetrated the globe. However, hammering or pounding with imperfect steel tools accounts for the majority of cases. The sizes of these fragments vary; the fragments in this series varied from .5 to 3 mm. in the greatest dimension.

Diagnosis of the presence of intraocular steel fragments may be overlooked if x-ray examination of all eye injuries sustained when the patient was pounding or hammering is not carried out. If a point or pathway of entrance is found upon examining a patient who gives the above type of history, the diagnosis is obvious but the external lesion may not be readily visible or visible at all. Persistence of inflammation in a case of eye injury where this is not explained by the other findings demands a roentgenogram to exclude the possibility of a foreign body. One of my cases had a small subconjunctival hemorrhage the size of a pin head at the limbus as the only visible evidence of trauma. Another had a small rent in the iris which was visible only by retroillumination with the ophthalmoscope. Obvious corneo-

scleral wounds with the aforementioned anamnesis are usually conclusive, when found, of the presence of foreign body.

The prognosis for the injured eye is nearly always eventual loss of sight through damage to the uvea, lens and retina by the rust formation caused by the chemical action of the fragment and the intraocular fluids. This process is accelerated or retarded according to the location of the particle. Lens particles are the best tolerated; those in the ciliary body least well. Some years ago I observed a case that had had a fragment lodged in the lens for twenty years. The lens material had been completely absorbed, and the remains of the enmeshed sliver was in a cicatricial lens capsule; the patient still could count fingers held up to his face. The usual story of retained fragments is a progressive siderosis bulbi and destruction of vision within a year or so; degenerative changes, with deposition of iron pigment in the uvea, retina and lens capsule, are the pathologic changes that occur in such eyes. Sympathetic ophthalmia is always a potential hazard in any penetrating ocular injury and may occur either with or without removal, before or after extraction. The sooner the fragment is removed following injury the better the prognosis in a given case due to the fact that cicatricial formation with an increasing amount of fixation occurs as time progresses and the further advanced the rust degeneration has gone.

The particular surgical approach to these fragments in the vitreous, posterior to the ora serrata, is a matter of heated dispute. Fragments anterior to the ora serrata are usually treated by pulling the fragment through the pupil around the lens into the anterior chamber with the giant magnet. The eye is then entered at the limbus with a keratome and the fragment removed, using the small hand magnet tip in direct contact. Verhoeff and Gulliver, among others, recommend attempting to pull routinely, originally, all fragments in the vitreous around the lens and through the pupil into the anterior chamber before opening the eye at the limbus for removal. This is ad-

vocated for the reason that a posterior sclerotomy incision, as closely placed over the site of the foreign body as possible, may result in an eventual retinal separation. The advocates of a posterior approach are Sweet, Shoemaker and Stieren, among others. The chief drawbacks to the anterior approach are possible incarceration in the iris or ciliary body and the added trauma due the longer route of exodus. Stieren, in an industrial community, has done magnet extractions on seven hundred foreign bodies in the vitreous using the posterior route exclusively and reports having had detachment occur rarely. Shoemaker who had extensive experience in magnet extractions during the first World War reports the following in the *American Journal of Ophthalmology* (1919, p. 593): "If the anterior segment of the eyeball is intact and uninjured, I certainly would not injure it by dragging a foreign body from the vitreous into it and then further injure it by taking the foreign body from it!" Precise x-ray localization is extremely valuable in removing fragments by the posterior approach but is unnecessary other than to know that the fragment is in the globe in the anterior approach. Sweet's method of localization was carried out in each case by Drs. Meadows and Kesmodel, and when the posterior approach was used the fragments were found at the precise point they indicated them. I used in these cases the anterior route once, the posterior route twice, the wound of entry once and incision over the pars plana of the ciliary body, as advocated by Verhoeff, once.

REPORT OF CASES

Case 1. D. H., white female, age 21, admitted to the hospital on 5/26/44 was setting tools on moving machinery when a piece of steel flew off, hitting her in the right eye. Upon examination a few hours later there was a corneal scar, a rent in the iris, and a very small rent in both the anterior and posterior capsule, as well as an opaque pathway in the periphery of the lens. I could not locate the steel with the ophthalmoscope. Sweet's localization fixed the fragment 10 mm. behind the anterior corneal surface. This fragment was therefore in the vitreous behind the ora serrata; a posterior sclerotomy approach was made closest to the piece of steel and removed with the magnet. The postoperative period was uneventful. The final vision in this patient with a small correction was 20/25 with Snellen test type; there was no impairment of accommodation despite the lens changes, for the patient could read Jaeger 1 uncorrected. The lens opacity has remained stationary and has never extended to

involve the portion of the lens constituting the visual axis.

Case 2. C. B. T., white male, age 34, admitted to the hospital on 6/27/44 had an unusual accident: A blast of compressed air blew steel fragments in his face as he passed a porthole on a ship, one of which entered the right eye. This accident occurred three weeks prior to the time that I saw him first. Due to severe persistent eye pain and marked injection of the eye I was called into consultation to see this man. He had been under treatment from the onset of the injury but due to the manner of the injury an intraocular foreign body was not suspected. The finding which aroused my suspicion was a rent in the iris which could be seen only on retroillumination with the ophthalmoscope as a source of light. The piece of steel, however, was not in view. X-ray revealed a metallic fragment from 4-6 mm. posterior to the apex of the cornea. The eye was cocaineized and the giant magnet brought close to the eye with the tip in line with the visual axis, the current was turned on and the steel immediately jumped through the pupil into the anterior chamber to the posterior corneal face; as the current was turned off the fragment fell to the bottom of the anterior chamber. A keratome incision was made at the limbus and a hand magnet applied through the incision with extraction of the fragment; the postoperative period in this patient was uneventful and his final vision without correction was 20/15. There had been no damage to the lens in this case.

Case 3. J. P., age 21, white male, admitted to the hospital on 8/8/44 was pounding a nail into a board with a steel hammer when a piece flew off and entered the left eye. When I saw this patient 24 hours after the accident there was a large rent in the sclera about 4 mm. long just at the insertion of the internal rectus muscle. Vitreous was herniating through the wound but no uveal tissue. The fragment could be seen easily with the ophthalmoscope in the vicinity of the wound of entry. The removal in this case was extraordinarily simple; the giant magnet was brought in apposition with the wound of entry, the current turned on and the steel jumped out. A conjunctival flap was fashioned to cover this wound and sutured in place. Recovery was uneventful. Penicillin intramuscularly was given for 48 hours in this case. The final vision was 20/40 with correction two months later, at which time there was no evidence of retinal separation.

Case 4. A. A. Q., white male, age 40, was admitted to the hospital on 1/19/45. Two days previous he had been driving a nail with a steel hammer when a piece flew off entering his left eye. The only external evidence of trauma in this case was a subconjunctival hemorrhage the size of a small pinhead just at the limbus. A piece of steel in the vitreous could be seen with the ophthalmoscope. Sweet localization fixed this fragment in the area immediately behind the posterior capsule of the lens. An attempt to pull the fragment into the anterior chamber incarcerated it in the pars plana of the ciliary body. Verhoeff many years ago advised incising the sclera over the pars plana of the ciliary body for

just such a contingency. The point for making the incision was determined by finding the point of greatest pain when the magnet was brought opposite to the sclera with the current on. Through this incision the steel was removed with great ease. This patient's recovery was uneventful and almost three months later has 20/20 vision without correction.

Case 5. R. H. B., white male, age 19, was admitted to the hospital on 2/8/45; earlier in the day he had been pounding a piece of machinery with a hammer when a piece of steel flew off entering his right eye. He had a wound of entry through the cornea and lens that was readily visible. I saw the patient two hours after the injury and the lens was already clouding rapidly. Despite this the fragment could be seen in the vitreous with the ophthalmoscope. This piece was 19 mm. back and to the nasal side. The fragment was removed very easily through a posterior sclerotomy directly over the steel; however, to get to this point in the sclera the internal rectus muscle was detached at its insertion for adequate exposure. Following removal it was sutured back in place; the lens opacity went on to full maturity and on 5/5/45 a linear extraction of the cataract was carried out. The patient's vision is 20/25 with a + 11.25 spherical correction.

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Stieren, E.: Magnet Extraction from Vitreous, *Am. J. Ophth.* 15: 1120-1122 (Dec.) '32.
Verhoeff, F. H.: Concerning Magnetic Intraocular Foreign Bodies and Their Removal, *Am. J. Ophth.* 15: 685-689 (Aug.) '32.

Finding Early Tuberculosis—That the majority of tuberculous patients are moderately or far advanced when admitted to sanatoria for treatment is a well accepted fact by all engaged in this specialty. This has been noted by the writer in several states where he has worked, regardless of their location and their organization to combat tuberculosis.

Earlier diagnosis is essential to lower the morbidity and mortality rates of tuberculosis, and to reduce the period of sanatorium treatment.

General medical practitioners are the front line troops in the fight against the great white plague, which, contrary to all propaganda, is still our worst killer of persons between the ages of 18 and 35. The general physician should always suspect its presence and utilize all diagnostic procedures available for each patient under observation.

This can be accomplished by annual surveys of high school children and their teachers, factory workers, employes in every line of business, and the professions, including all contacts exposed to active cases of the disease. The annual early diagnosis campaign of the National Tuberculosis Association also discovers numerous active cases throughout the nation.—*Mercer, Virginia M. Monthly, August 1945.*

The Periodic Health Examination—What values may be anticipated from the periodic health examination? If properly done, certain communicable diseases should be discovered. This discovery, followed by suitable isolation and treatment, should reduce the incidence of syphilis, gonorrhea, tuberculosis and Vincent's angina. More thorough examinations would also discover diphtheria, hemolytic streptococcus, typhoid, amebic and bacillary dysentery carriers, as well as other diseases less common in the United States.

Such examinations should discover non-communicable diseases in an earlier stage than would otherwise be the case, thus making any treatment which is given more effective. Diabetes, cancer, cardiovascular disease, rheumatism, psychiatric abnormalities and many other conditions would fall in this category. Numerous studies could be quoted to bear out the value of early treatment in diseases of these types. However, judging by the general apathy of the medical profession toward the periodic examination, it is evident that they have not really been sold on the value of early treatment. If they had been convinced of its value, surely they would realize that the only way to find early disease is to look for it where it is not even suspected by the patient. This has been adequately demonstrated in the case of tuberculosis. Every enlightened physician today realizes that if minimal tuberculosis is to be found in a high percentage of the cases diagnosed, case finding studies must be made before symptoms have been noted by the patient.

One important value of the periodic examination of apparently well persons is a teaching medium for medical students. If students during their training period learn the technic of examining well persons, there will be considerably less difficulty when they start in practice. They will know what to do when a patient comes in to the office and says he feels fine, but wants an examination made so that he can continue to feel well. At present, when such a person presents himself in an office or clinic, he often meets the reaction that he has no business coming to the doctor, and is reproached for doing so. There may be some slight justification for such action during the present physician shortage; but, under normal circumstances, such a patient should receive all possible encouragement, and be given what he has requested, with as much included of educational value as possible. . . .

The periodic health examination has a long but rather inglorious history. The fact that it has not been more widely used is probably due more to a misconception of the real purpose than to the fact that the procedure itself is without great value. If it is looked upon as a rather complete screening process which must be so simplified and reasonable in cost that it can readily be applied to a large percentage of the population, it will probably become a much more valuable tool in the future than it has been in the past.—*Leavell, South. M. J., August '45.*

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DERMATITIS EXFOLIATIVA FOLLOWING ARSPHENAMINE

"During the course of each year, a number of patients suffering from dermatitis exfoliativa caused by the arsphenamines are treated in the dermatologic wards of Bellevue Hospital. Most of these patients have been treated for syphilis by private physicians, hospital clinics or public health services in New York City. The 50 cases reported herein were observed at Bellevue Hospital between the years 1937 and 1942, showing that the dreaded postarsphenamine dermatitis is not rare even in the present period of antisyphilitic therapy." Thus do Costello and Landy¹ open their discussion of this tragic reaction which we have never been able to eliminate entirely. The New York investigators tell us that their patients ranged from eighteen to sixty-nine years of age, that their average hospital stay was forty-three days. Forty-two of them had received neoarsphenamine and four had received mapharsen and we come to the highly significant lines—"The majority of the patients complained of pruritis or dermatitis soon after the fifth, sixth or seventh injection.

In many cases either these warning signs were not observed or the patient was not questioned concerning them. Ignorance of the significance of mild itching and mild dermatitis in the course of arsenical therapy led to full-blown dermatitis exfoliativa."

The authors tell us that "it appeared to make little difference whether the arsphenamine was administered with a heavy metal in alternating courses, concurrently or alone."

We are further informed that sodium thio-sulfate was of no value in treatment, that intravenous glucose was administered to ten of the patients daily for ten days, and concentrated vitamin preparations, including ascorbic acid, were given. Lack of space forbids reference to the various forms of local treatment.

In an effort to prevent as many of these terrible reactions as possible the authors made a series of recommendations which are herewith quoted in part:

"The patient should be asked at each visit whether he has itching, a rash, fever or headache."

"When arsphenamine, neoarsphenamine or silver arsphenamine has been used, it is advisable to have the patient remove his clothes for a complete examination of the skin before the sixth, seventh and eighth injections. A similar examination should be performed before the twelfth to the fifteenth injection of mapharsen."

"If a patient develops an eruption that is not readily recognized as one caused by the arsphenamines, it is safer to withhold treatment until a dermatologist decides the question."

"The patient should always be asked, regardless of the stage of the syphilitic infection, whether he has previously received intravenous or intramuscular injections. Information on this point may modify treatment and thus prevent the explosive reaction following the first dose of an arsphenamine drug in a sensitized person."

"Further treatment with an arsenical preparation should never be given if the original dermatitis was vesiculobullous or exfoliative. Disregard of this warning may be fatal . . ."

And, in the concluding paragraphs, the Bellevue observers tell us that "freedom

(Continued on page 46)

1. Costello, Maurice J., and Landy, Simeon: Dermatitis Exfoliativa Following Arsphenamine Therapy, New England J. Med. 232: 369 (March) 1945.

CONSTRUCTIVE PROGRAM FOR MEDICAL CARE

AMERICAN MEDICAL ASSOCIATION

This platform was adopted by the Council on Medical Service and Public Relations and the Board of Trustees of the American Medical Association on June 22, 1945.

Preamble

The physicians of the United States are interested in extending to all people in all communities the best possible medical care. The Constitution of the United States, the Bill of Rights and the "American Way of Life" are diametrically opposed to regimentation or any form of totalitarianism. According to available evidence in surveys, most of the American people are not interested in testing in the United States experiments in medical care which have already failed in regimented countries.

The physicians of the United States, through the American Medical Association, have stressed repeatedly the necessity for extending to all corners of this great country the availability of aids for diagnosis and treatment, so that dependency will be minimized and independence will be stimulated. American private enterprise has won and is winning the greatest war in the world's history. Private enterprise and initiative manifested through research may conquer cancer, arthritis and other as yet unconquered scourges of humankind. Science, as history well demonstrates, prospers best when free and unshackled.

Program

The physicians represented by the American Medical Association propose the following constructive program for the extension of improved health and medical care to all the people:

1. Sustained production leading to better living conditions with improved housing, nutrition and sanitation which are fundamental to good health; we support progressive action toward achieving these objectives:

2. An extended program of disease prevention with the development or extension of organizations for public health service so that every part of our country will have such service, as rapidly as adequate personnel can be trained.

3. Increased hospitalization insurance on a voluntary basis.

4. The development in or extension to all localities of voluntary sickness insurance plans and provision for the extension of these plans to the needy under the principles already established by the American Medical Association.

5. The provision of hospitalization and medical care to the indigent by local authorities under voluntary hospital and sickness insurance plans.

6. A survey of each state by qualified individuals and agencies to establish the need for additional medical care.

7. Federal aid to states where definite need is demonstrated, to be administered by the proper local agencies of the states involved with the help and advice of the medical profession.

8. Extension of information on these plans to all the people with recognition that such voluntary programs need not involve increased taxation.

9. A continuous survey of all voluntary plans for hospitalization and illness to determine their adequacy in meeting needs and maintaining continuous improvement in quality of medical service.

10. Discharge of physicians from the armed services as rapidly as is consistent with the war effort in order to facilitate redistribution and relocation of physicians in areas needing physicians.

11. Increased availability of medical education to young men and women to provide a greater number of physicians for rural areas.

12. Postponement of consideration of revolutionary changes while 60,000 medical men are in the service voluntarily and while 12,000,000 men and women are in uniform to preserve the American democratic system of government.

13. Adoption of federal legislation to provide for adjustments in draft regulation which will permit students to prepare for and continue the study of medicine.

14. Study of postwar medical personnel requirements with special reference to the needs of the veterans' hospitals, the regular army, navy and United States Public Health Service.

(Continued from page 44)

from reaction to arsphenamines at a previous time does not guarantee the same good fortune with future arsenical treatments."

"Major arsenical dermatitides are extremely resistant to all forms of general and local treatment, including the application of superficial roentgen rays."

"The major arsphenamine dermatitides have certain features in common: they are pruritic; they are generalized or universal; they are exfoliative, with constitutional symptoms and evidence of injury to the viscera, especially the liver; and they are made worse by the continuation of arsenical therapy."

The frequency and severity of the post-arsphenamine reactions have been steadily reduced ever since the arsphenamines were introduced. But they are still with us and, ranging from slight, temporary discomfort to exfoliation and death, they occur far too frequently. These untoward effects of arsphenamine therapy cannot be forestalled completely but, by constant questioning and unflagging alertness on the part of the physicians, they can be all but eliminated.

COLONEL TEASLEY IS DEPUTY CHIEF OF PERSONNEL SERVICE

Lieutenant Colonel Gerald H. Teasley, MC, of Athens, Alabama, has been appointed Deputy Chief of the Personnel Service, Office of The Surgeon General, a capacity in which he has been acting for the past several months. He has served in various branches of the Personnel Service since coming to the Office of The Surgeon General in 1942.

Colonel Teasley received his A. B. from Mercer University, Macon, Ga., in 1926 and his medical degree from Emory University, Atlanta, Ga., in 1930. Prior to entering the Army in 1941 as a Captain in the Medical Corps, he practiced surgery and obstetrics in Athens, Ala. Before coming to The Surgeon General's Office, he served at Camp Lee, Va., and at William Beaumont General Hospital, El Paso, Tex.

Tuberculosis still ranks as our seventh or eighth cause of death. The major problem which confronts us, in this case, is early diagnosis; but this term no longer means the diagnosis of clinical disease by fever and a cough and loss of weight. It means diagnosis before clinical disease occurs at all—diagnosis through the magic of the X-ray.—C. E-A. Winslow, *Survey Graphic*, April 1945.

COMMITTEE CONTRIBUTIONS

CANCER CONTROL

AN OUTLINE OF PROGRESS IN THE CANCER PROBLEM

Contributed by

JOHN DAY PEAKE, M. D.
Mobile, Alabama

As a preface, reference to the early history of the cancer problem should prove interesting and valuable. Dr. Winter, a gynecologist in East Prussia, was the first to introduce educational work among laymen regarding cancer. This work was done through the lay midwives of East Prussia. In 1905 Dr. Louis McMurtry was president of the American Medical Association and it was under his sponsorship that Drs. John Clark and Frank Simpson were appointed to investigate cancer problems in America. The American College of Surgeons through Dr. Thomas Cullers secured the first lay

article on cancer written by Mr. Samuel Hopkins Adams, which was published in the *Ladies Home Journal*. In the same year, 1913, Dr. Fredrick Hoffman, at a meeting of the American Gynecologist Society, crystallized the subject which led to the formation of the American Society for the Control of Cancer.

The first task of the Society was to create interest in the pessimistic attitude of the physicians in regard to the early diagnosis, treatment and cure of cancer. This was accomplished by the cooperation of the American Medical Association, the Ameri-

can College of Surgeons, and through state and county medical societies. During this phase, many exhibits, lectures and numerous pamphlets were distributed. Later several motion pictures were added to the list.

Cancer clinics were established through the sponsorship of the American College of Surgeons and American Society for the Control of Cancer. The American Society for the Control of Cancer obtained the support of outstanding cancer experts, such as Drs. Bloodgood, Ewing, Wood and Simpson.

These leaders did much to frame the early program for the control and treatment of cancer. The first World War interrupted a conference being held in England pertaining to cancer problems.

Mrs. Robert Meade of New York was the first lady member of the Society and one of its most ardent workers. Much of her early work was done in cooperation with the general Federation of Women's Clubs and it was through her efforts that the Society was kept active during the first World War.

It was about this time that more literature and numerous lay articles were being published on early diagnosis of cancer and giving the hope that if diagnosed and treated, early cancer is curable. Many of the states through their health departments became active and established cancer committees to aid in the education of the physicians and the laity.

The Metropolitan Life Insurance Company issued several pamphlets on cancer problems. A number of schools through their teachers, and churches through their preachers, were beginning to spread the message of early diagnosis and treatment of cancer. In 1924 the week of November 18th was set aside by President Harding as Cancer Week.

By 1927 the Society had made tremendous strides through Mrs. Meade's leadership, and with the cooperation of outstanding physicians and business men in New York an endowment fund was raised for the American Society for the Control of Cancer. By this time, the Society had a number of full paid physicians and field representatives and a number of lay workers. Mrs. Frances Rigney became secretary and it was she who gave us the present slogan, "Fight Cancer with Knowledge."

By 1935 much progress had been made among the physicians and general public, and it was in this year that the Field Army of the American Society for the Control of Cancer was created. This, as you know, is a branch of the American Society for the Control of Cancer. The members were women who were interested in the cancer problem, trying to educate the general public that early cancer is curable. Through the Field Army, many pamphlets, numerous articles, exhibits and lectures were given to lay groups.

In 1937, by an Act of the Seventy-Fifth Congress, the National Cancer Institute was created. The wording of this Act was as follows: To conduct, assist and foster research investigations, experiments and studies relating to cancer prevention and methods of diagnosis and treatment of cancer. The sum of \$750,000.00 was appropriated for building and equipment and \$700,000.00 for maintenance. Drs. Hektone, Ewing, Wood and Little were appointed as directors.

The first preventive cancer clinic was established at the New York Infirmary for Women and Children. These clinics were for the purpose of biannual examinations of large groups of supposedly healthy individuals to diagnose early cancer. There are a number of these clinics functioning over the country. Through the effort of such clinics many otherwise undiagnosed cancers are found, treated and cured.

In 1938 Congress passed a bill authorizing the President to proclaim April of each year as National Cancer Control month.

Through the hard work of Drs. Little and Adair, much truth about the cause, diagnosis, treatment and result of cancer has been distributed among the physicians and laymen.

Now there are 350,000 women enrolled in the Women's Field Army. Last year the name of the American Society for Control of Cancer was changed to American Cancer Society and the Women's Field Army was changed to simple, Field Army, as the new Field Army now includes a number of men.

In conclusion let me summarize the chief aims and results of the present cancer program.

1. Education (Fight cancer with knowledge.): Early cancer is curable. Our only known methods of treatment are by use of surgery, x-ray and radium.

2. Preventive cancer clinics: These clinics could be established by any group of ethical physicians, or it would probably be better if this preventive work could be done by the family physician following certain recognized procedures. Dr. J. P. Chapman, our State Committee Chairman, has written a pamphlet, "What a Patient Should Expect in Examination of Cancer." This phase of the work will be rather slow, but some progress is being made.

3. Cancer clinics and physicians cooperating in cancer work should cooperate with general physicians in the diagnosis and treatment of cancer. This State has established a fund to take care of indigent patients. Several clinics are active at this time. The patient able to pay for examination and treatment should consult his family physician in regard to these problems.

4. Research: This phase of work is being carried out by the Medical Cancer Institute as well as numerous universities and research foundations.

5. The last phase of this work is being advocated by Dr. Adair and his Committee in New York for the establishing of hospital and nursing homes to take care of advanced hopeless cases that cannot be properly taken care of at home or their local hospitals.

It is believed you will agree that there is a very definite program before the physicians and laymen in regard to cancer problems, and that considerable progress has been made.

Note: The State Cancer Control Committee suggests the use of this material by Physicians addressing lay groups.

Urinary Tract Complications in Pregnancy—

The best method of detecting early infection in the urinary tract during pregnancy is by routine examination of the urine at regular intervals. Examination of the urine should not be postponed until symptoms appear. If pus is discovered in the voided urine, a catheterized specimen should be obtained. Next, the type of bacteria present in the dried urinary sediment should be determined and appropriate chemotherapy should be advised. Large amounts of fluids should be given orally and, if necessary, intravenously. Several quarts of fluid (3,000 to 4,000 cc.) may be taken daily by mouth. The early use of sulfonamide compounds permits small doses and results in little reaction. The various forms of mandelic acid, with acidification of the urine, may be of value in eliminating certain types of infection. The administration of penicillin may be of value in some types of resistant infection.—*Braasch and Mussey, Minnesota Medicine, July 1945.*

Bronchial Asthma—During an attack of bronchial asthma, the symptoms may fluctuate during a twenty-four hour period. It is important to note the time of day when symptoms are definitely aggravated or are more apt to appear. If this occurs following meals, it is suggestive of either a food or physical allergy. Hot or cold foods may be the causative or precipitation mechanism. Symptoms which occur only after retiring are strongly suggestive of offending allergens being present in the patient's room. Inhalants, such as dust, feathers, orris root and cosmetics, are present in this room in greater concentration than elsewhere. They may be harmful only in such large exposures as contacted during the sleeping hours, and thus cause asthma at night or in the early morning hours. On the other hand, it may be due to the pathological physiology incident to this condition. Foods can, and often do, cause symptoms during the night as well as during any time of the day. The delayed reactions, in relation to food offenders, are more common than immediate ones and therefore much more difficult to ascertain.

Atmospheric alterations, such as temperature and humidity changes, are often responsible for precipitating attacks. Rapid changes of weather will often result in an acute episode. As a working explanation, it is not untenable that with atmospheric alterations a general increase in tissue fluids occurs and the patient who is on the verge of an attack may be thrown into the symptom class. Other factors, such as menstruation, pregnancy and bacterial disease, may serve also in lowering the patient's allergic threshold. Under average conditions, the patient may get along in apparently perfect health with no obvious difficulty in breathing. When the above mentioned additional factors enter the picture, the patient's tolerance is lowered and symptoms precipitated. In such individuals, the allergenic substances are not present in sufficient quantities, under average conditions, to cause a disturbance in the shock organs, but they are constantly close to the border or on the verge of an upset. As long as the bronchial tissue is not aggravated, the patient remains within the zone of health. The allergic tolerance varies from day to day and may explain at least in part the fluctuations in asthmatic symptoms. This also helps explain the reason an allergic individual who is a potential asthmatic may not experience symptoms for many years. This eventually occurs when the allergic threshold is exceeded. It may also explain the reason patients can at times be well controlled by proper allergic management of one phase of sensitivity (food or inhalants), when, actually, multiple factors are at fault. This fact often gives the doctor the erroneous impression that only one factor is of significance. It is therefore well to keep this explanation in mind as a working basis in treatment as well as in diagnosis. If, at one time, the patient responds solely to dietary management, and at other times does not, it means that the therapeutic approach is not entirely correct and that additional offenders may be responsible.—*Friedlaender, J. Michigan M. Soc., July '45.*

THE ROSTER OF THE ASSOCIATION

THE ANNUAL ROSTER OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA 1945 ROSTER BY COUNTY SOCIETIES

ABBREVIATIONS AND SYMBOLS

- (S.) indicates that the physician is in the service of his country.
mc Ala. 06 indicates school and year of graduation.
cb 94 indicates licensure by county board of medical examiners in county where located, and year licensed.
cb Butler 94 indicates county board of medical examiners granting license, and year licensed.
sb 10 indicates licensure by the State Board of Medical Examiners, and year licensed.
recip. Miss. 27 indicates licensure by reciprocity, the reciprocating state, and year reciprocity was granted.
NBE indicates licensure by reciprocity with the National Board of Medical Examiners.
* indicates that the Health Officer is serving two counties, and footnote gives county where credentials may be found.

(1) AUTAUGA COUNTY

Montgomery 1874

President—J. E. Wilkinson	Prattville
Vice-President—G. M. Taylor	Prattville
Secretary-Treasurer—E. M. Moore	Prattville
County Health Officer—E. M. Moore	Prattville

Censors—R. G. Shanks, Chairman, Autaugaville; J. E. Wilkinson, Prattville; G. E. Newton, Prattville; E. M. Thomas, Prattville; G. M. Taylor, Prattville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Moore, Elisha M., mc Ala. 11, sb 13, Prattville.
Newton, George E., mc Tenn. 35, sb 36, Prattville.
Shanks, Rufus George, mc Memphis Hosp. 01, cb Butler 01, Autaugaville.
Tankersley, James, mc Ala. 06, cb Crenshaw 06, Prattville.
Taylor, George Malcolm, mc Atlanta P. & S. 05, cb Montgomery 05, Prattville.
Thomas, Eugene Marvin, mc P. & S. Baltimore 07, cb 07, Prattville.
Wilkinson, John Edward, Jr., mc Univ. South 00, cb 00, Prattville.
Total 7

PHYSICIANS NOT MEMBERS

Campbell, V. O., mc Ala. 00, cb 00, Billingsley.
Total 1

(2) BALDWIN COUNTY

Anniston 1886

President—C. G. Godard	Fairhope
Vice-President—H. C. Jordan	Robertsdale
Secretary-Treasurer—W. B. Nelson	Bay Minette
County Health Officer—W. B. Nelson	Bay Minette

Censors—J. C. McLeod, Chairman, Bay Minette; C. G. Godard, Fairhope; P. M. Hodgson, Stockton; H. C. Jordan, Robertsdale; R. A. Hail, Robertsdale.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Bryars, J. Floyd, mc Ala. 05, cb 05, Bay Minette.
Godard, Claud George, mc Ala. 14, sb 14, Fairhope.
Hail, R. A., mc Tenn. 94, cb 01, Robertsdale.
Hodgson, Philip Morton, mc Atlanta 89, cb Monroe 89, Stockton.
Holmes, William Coghlan, mc Tulane 24, recip. La. 26, Foley. (S.)
Jordan, Henry C., mc LSU 34, recip. La. 37, Robertsdale.
Jordan, Henry W., mc Memphis Hosp. 12, sb 12, Robertsdale.
McLeod, John Calvin, mc Ala. 00, cb Coosa 00, Bay Minette.
Nelson, William Bruce, mc Tulane 37, recip. La. 39, Bay Minette.
Skinner, Percy B., mc Ala. 05, cb Conecuh 05, Fairhope.
Total 10

PHYSICIANS NOT MEMBERS

Dahlgren, Leora Perry, mc S. C. 23, recip. W. Va. 43, Fairhope.
Jones, Thomas Wilkins, mc Memphis Hosp. 06, recip. Tenn. 41, Loxley.
Meeks, Alfred A., mc Ala. 14, sb 14, Foley.
Newman, Leonce D., mc Tulane 33, recip. La. 39, Bay Minette.
Stanley, Robert Hendricks, mc Ala. 94, cb Butler 94, Foley.
Teaford, Benjamin J., mc Univ. Louisville 02, recip. Ind. 37, Fairhope.
Van Iderstine, Reginald, mc Chicago 06, cb 07, Daphne.
Total 7

(3) BARBOUR COUNTY

Eufaula 1878

President—R. O. Norton	Louisville
Vice-President—J. B. Adams	Eufaula
Secretary-Treasurer—G. O. Wallace	Clayton
County Health Officer—G. O. Wallace	Clayton

Censors—J. S. Tillman, Chairman, Clio; R. O. Norton, Louisville; James Reid, Clayton; J. B. Adams, Eufaula; P. P. Salter, Eufaula.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Adams, John Ball, mc Vanderbilt 30, sb 30, Eufaula.
Bennett, Clarence R., mc Emory 28, recip. Ga. 29, Eufaula.
Britt, Walter Stratton, Jr., mc Cornell 31, sb 31, Eufaula. (S.)
Clark, Hugh G., mc Texas 34, recip. Texas 37, Clayton. (S.)
Comer, Edward T., mc Vanderbilt 35, sb 35, Eufaula. (S.)
McInnis, William R., mc Memphis Hosp. 96, cb 99, Clio.
McLaughlin, James Daniel, mc Ala. 10, sb 10, Blue Springs.
Norton, Robert Olon, mc Ala. 11, sb 11, Louisville.
Patterson, Robert B., mc P. & S. Atlanta 99, cb 99, Louisville.
Reid, James, mc Ala. 12, sb 12, Clayton.
Rodriguez, Jose M., mc Ark. 26, recip. La. 34, Louisville. (S.)
Salter, Paul Pullen, mc Tulane 16, sb 16, Eufaula.
Tillman, John S., mc Grant 07, cb 07, Clio.
Wallace, George Oscar, mc Ala. 91, cb 91, Clayton.
White, Robert Lee, mc Ala. 98, sb 98, Mt. Andrew.
Total 15

PHYSICIANS NOT MEMBERS

McCoo, Thomas V. (col.), mc Leonard 06, cb 07, Eufaula.
Total 1

(4) BIBB COUNTY

Birmingham 1887

President—Cooper Nicholson Centerville
Vice-President—L. E. Peacock W. Blocton
Secretary-Treasurer—J. R. Long Centerville
County Health Officer—J. R. Long* Centerville

Censors—S. C. Meigs, Chairman, Centerville; C. F. Krout, Brent; L. E. Peacock, West Blocton; T. E. Schoolar, Centerville; W. J. B. Owings, Brent.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Crowder, John W., mc Univ. South. 04, cb 05, West Blocton.
Krout, Charles F., mc Ala. 95, cb 95, Brent.
Meigs, Stephen C., mc Ala. 02, cb 02, Centerville.
Montgomery, J. Ethel (Mrs. J. W. Crowder), mc Univ. Minn. 28, recip. Minn. 32, Belle Ellen.
Nicholson, Cooper, mc Ala. 13, sb 19, Centerville.
Owings, William J. B., mc Tulane 32, sb 32, Brent.
Peacock, Lovic Edward, mc Ala. 92, cb Marengo 92, West Blocton.
Schoolar, Thornly Edward, mc Vanderbilt 92, cb 92, Centerville.
Stinson, Willie E., mc Emory 31, sb 31, Gadsden.
Tucker, John S., mc Ala. 06, cb Marengo 06, Dixiana (Jefferson).
Total 10

PHYSICIANS NOT MEMBERS

None

(5) BLOUNT COUNTY

Eufaula 1878

President—F. F. Whitehead Blountsville
Vice-President—N. C. Denton Oneonta
Secretary-Treasurer—C. L. Stansberry Oneonta
County Health Officer—T. M. Towns Oneonta

Censors—E. T. Brown, Chairman, Cleveland; C. L. Stansberry, Oneonta; F. F. Whitehead, Blountsville; W. W. Klein, Altoona, Rt. 2; T. M. Towns, Oneonta.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Brown, Elridge Tracy, mc Vanderbilt 17, recip. Tennessee 19, Cleveland.
Denton, Marvin, mc Univ. Nashville 05, cb 07, Oneonta.
Denton, Nathan Carter, mc Univ. Nashville 05, cb 06, Oneonta.
Klein, Warwick Wesley, mc Univ. Louisville 05, recip. Ky. 19, Altoona, Rt. 2.
Miles, William C., mc Ala. 00, cb Limestone 00, Oneonta.
Self, George Washington, mc Baltimore 90, cb 90, Trafford.
Stansberry, Chas. Lee, mc Grant 99, cb Fayette 01, Oneonta.
Stone, James T., mc Memphis Hosp. 91, cb Marion 91, Oneonta.
Towns, Thos. M., mc Univ. Ark. 29, sb 29, Oneonta.
Whitehead, Frank Fay, mc Ark. 33, recip. Ark. 34, Neosha, Mo.
Whitehead, Vernon Erick, mc Ala. 15, sb 15, Blountsville.
Total 11

PHYSICIANS NOT MEMBERS

Bell, James Edgar, mc Univ. Nashville 91, sb 17, Trafford, Rt. 1. (License revoked April 19, 1943.)

*See also Perry County.

Hendrix, Clive V., mc Univ. Tenn. 27, recip. Tenn. 29, Ononta.
Total 2

(6) BULLOCK COUNTY

Eufaula 1878

President—C. M. Franklin Union Springs
Vice-President—C. W. McDonald Union Springs
Secretary-Treasurer—J. K. Haygood Union Springs
County Health Officer—C. W. McDonald Union Springs

Censors—C. W. McDonald, Chairman, Union Springs; J. K. Haygood, Union Springs; W. H. McCaslan, Union Springs; C. M. Franklin, Union Springs.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Franklin, Charles Moore, mc P. & S. N. Y. 98, cb 98, Union Springs.
Haygood, James Kern, mc Western Reserve 23, recip. Ohio 28, Union Springs.
McCaslan, Wm. Hill, mc Columbia 21, sb 28, Union Springs.
McDonald, Charles W., mc Univ. Nashville 04, cb Cullman 04, Union Springs.
Owen, Hubert R., mc Northwestern 33, recip. Mich. 35, Union Springs. (S.)
Parker, Delmer F., mc Univ. Ore. 37, recip. Ore. 39, 732 Linwood Rd., Birmingham. (S.)
Total 6

PHYSICIANS NOT MEMBERS

Gomez, Clifton Jules (col.), mc Howard 39 sb 41, Union Springs.
Total 1

(7) BUTLER COUNTY

Montgomery 1875

President—J. L. Bryan Greenville
Vice-President—B. L. Piper Georgiana
Secretary-Treasurer—E. F. Leatherwood Greenville
County Health Officer—E. F. Leatherwood* Greenville

Censors—L. V. Stabler, Chairman, Greenville; J. C. Johnston, Chapman; J. L. Bryan, Greenville; James Jordan, McKenzie; H. P. Speir, Greenville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Bryan, James Lafayette, mc Ala. 01, cb Crenshaw 01, Greenville.
Gay, Otis Franklin, mc Tulane 35, recip. La. 38, Greenville. (S.)
Henderson, Hiliary H., mc Ala. 08, sb 08, Greenville.
Johnston, Jos. Cephas, mc Atlanta P. & S. 12, recip. Ga. 26, Chapman.
Jordan, James, mc Memphis Hosp. 12, sb 12, McKenzie.
Kendrick, James E., mc Tulane 33, recip. La. 35, Greenville. (S.)
Piper, Barney Lee, mc Atlanta 16, sb 16, Georgiana.
Speir, Henry Philip, mc Univ. Louisville 31, sb 32, Greenville.
Speir, Philip Van Buren, mc Ala. 00, cb Wilcox 00, Greenville.
Stabler, Aubrey A., mc S. C. 37, recip. S. C. 38, Greenville. (S.)
Stabler, E. Vernon, mc Harvard 29, Nat. Bd. Ex. 32 Greenville.
Stabler, Lorenzo V., mc Vanderbilt 98, cb 98, Greenville.
Wall, Conrad, mc Ala. 97, cb 97, Forest Home.
Watson, Robert H., mc Ala. 05, cb 05, Georgiana, RFD.
Total 14

PHYSICIANS NOT MEMBERS

None.

*See also Lowndes County.

(8) CALHOUN COUNTY

Montgomery 1881

President—W. M. Salter
Vice-President—C. H. Cleveland
Secretary—M. S. Adams
Treasurer—W. M. Salter
County Health Officer—S. E. Langer

Anniston
Anniston
Anniston
Anniston
Anniston

Censors—T. F. Huey, Sr., Chairman, Anniston; N. T. Davie, Anniston; N. E. Sellers, Anniston; C. H. Cleveland, Anniston; W. M. Salter, Anniston.

NAMES OF MEMBERS WITH THEIR COLLEGES AND
POSTOFFICES

Adams, Montague S., mc Tulane 38, sb 39, Anniston.
Britton, Jas. Woodruff, mc Emory 27, recip. Ga. 30, Foley.
Caffey, Benjamin F., mc Tulane 11, sb 11, Choccolocco.
Chilton, Alfred M., mc Vanderbilt 34, recip. Tenn 35, Anniston. (S.)
Cleveland, C. Hal, mc Vanderbilt 15, sb 15, Anniston.
Cleveland, Hunt, mc Vanderbilt 32, recip. Tenn. 36, Anniston. (S.)
Davie, Nuckols T., mc Tulane 09, sb 09, Anniston.
De Armas, Charles R., mc LSU 36, recip. La. 44, Ft. McClellan. (S.)
Durdin, John D., mc Ala. 17, sb 17, Anniston.
Gray, Hugh E., mc Univ. Mich. 24, recip. Mich. 26, Anniston.
Green, Elbert Pierce, mc Ga. 99, cb Randolph 99, Jacksonville.
Gross, Esther, mc Univ. Cincinnati 40, recip. Ohio 41, Anniston.
Gross, George D., mc Yale 36, NBE 41, Anniston. (S.)
Hamilton, Grover Cleveland, mc Emory 16, sb 16, Piedmont.
Huey, Thomas F., mc Tulane 01, cb Perry 01, Anniston.
Huey, Thomas F., Jr., mc Vanderbilt 32, recip. Tenn. 34, Anniston. (S.)
Kimmey, John Mason, mc Emory 28, sb 28, Anniston. (S.)
Levi, Irwin P., mc Pa. 09, sb 09, Anniston.
Leyden, Horace A., mc Tenn. 09, sb 10, Anniston.
Lloyd, William K., mc Tulane 21, recip. Va. 38, Anniston.
McCraw, Reuben T., mc Ala. 13, sb 14, Oxford.
Meharg, Shelton T., mc Memphis Hosp. 00, cb 00, Anniston.
Meharg, William G., mc Memphis Hosp. 99, cb 99, Anniston.
Meigs, James H., mc Vanderbilt 25, sb 25, Anniston. (S.)
Morton, Lloyd E., mc Atlanta P. & S. 11, recip. Ga. 18, Anniston.
Planck, Ernest H., Jr., mc Tulane 37, recip. La. 38, Anniston.
Posey, James F., mc Emory 17, sb 18, Anniston.
Rayfield, John Dexter, mc Tenn. 34, recip. Tenn. 37, Jacksonville.
Salter, Wilbur M., mc Ala. 07, cb Conecuh 07, Anniston.
Sellers, Neil E., mc Ala. 05, sb 05, Anniston.
Spearman, George Knox, mc Vanderbilt 31, sb 31, Anniston. (S.)
Van Sant, John W., mc Georgia Eclectic 04, cb Marshall 06, Piedmont.
Van Sant, Thomas E., mc Tenn. 31, recip. Tenn. 32, Piedmont.
Watson, Jerre, mc Ala. 16, sb 16, Anniston.
Weaver, Frank C., mc Ala. 13, sb 13, Anniston.
White, William E., mc Harvard 37, sb 38, Anniston. (S.)
Whiteside, Hamlin B., mc Ala. 10, sb 10, Ohatchee.
Whiteside, John M., mc Vanderbilt 84, cb 84, Anniston (Retired).
Williams, James, mc Ala. 10, sb 10, Jacksonville.
Woodruff, Gerald G., mc Tulane 20, sb 20, Anniston. (S.)
Woolf, Jos. H., mc Ill. 27, sb 27, Piedmont.

Total 41

PHYSICIANS NOT MEMBERS

Hunt, James Edgar, mc Univ. Ga. 04, recip. Ga. 45, Ordnance Depot, Anniston.
Jackson, Fred D. (col.), mc Meharry 14, sb 14, Anniston.
Meharg, Robert L., mc Ala. 06, cb 06, Alexandria.
Rodgers, Gordon A. (col.), mc Meharry 08, sb 07, Anniston.
Shipp, Larry G., mc LSU 40, recip. La. 44, Anniston.
ann, Paul D., mc Ala. 96, cb DeKalb 96, Anniston.
Total 6

HONORARY MEMBER

Langer, Sydney E., U. S. Public Health Service, Anniston.

(9) CHAMBERS COUNTY

Montgomery 1881

President—H. S. Weldon
Vice-President—P. W. Auston
Secretary-Treasurer—W. H. Riser
County Health Officer—A. H. Graham* (Acting) Lafayette
Censors—M. C. Hunt, Chairman, Fairfax; A. B. Lcc, Lanett; W. L. Marshall, Langdale; J. H. Moore, Lafayette; A. E. Henderson, Fairfax.

NAMES OF MEMBERS WITH THEIR COLLEGES AND
POSTOFFICES

Auston, Paul W., mc Univ. Pa. 29, sb 30, Shawmut.
Frazer, Ben F., mc Tulane 14, sb 15, Lafayette.
Gaines, William D., mc Ala. 92, cb 92, State Prison Hosp., Atmore.
Henderson, Ernest A., mc Univ. Okla. 38, recip. Okla. 40, Fairfax.
Hodge, Emory K., mc Atlanta 09, sb 09, Fairfax.
Hunt, M. C., mc Tulane 23, sb 23, Fairfax.
Lee, Aubrey Bernard, mc Vanderbilt 32, sb 32, Lanett.
Marshall, W. L., mc P. & S. Atlanta 06, cb Randolph 06, Langdale.
Moore, James Henry, mc Emory 97, recip. S. C. 42, Lafayette.
Morrow, R. P., mc Ala. 11, sb 11, West Point, Ga.
Perley, A. I., mc Rush 35, sb 36, Lafayette. (S.)
Riser, William H., mc Ala. 08, sb 07, Lafayette.
Weldon, Howard S., mc S. C. 40, sb 41, Lanett.
Wheeler, N. A., mc Atlanta P. & S. 07, cb 07, Lafayette.
Wheeler, N. A., Jr., mc Emory 39, recip. Ga. 40, Lafayette. (S.)
Total 15.

PHYSICIANS NOT MEMBERS

Calhoun, Samuel James, mc Ala. 15, sb Ga. 17, Langdale.
Cowles, Wm. L., mc Va. 08, recip. Va. 21, Shawmut.
Haralson, Thomas H., mc Memphis Hosp. 99, cb Tallapoosa 99, Cusseta.
Jones, Henry T., mc Emory 22, sb 22, Lanett.
Weldon, Robert L., mc Georgia Eclectic 02, cb Lee 02, Lanett.
Total 5

HONORARY MEMBERS

Byrd, Mark M., mc Emory 25, sb Ga. 25, West Point.
McCulloh, Hugh, Jr., mc Emory 25, sb Ga. 25, West Point.
Morgan, James Calvin, mc Ala. 14, sb 16, West Point.
Williams, Chas. O., mc Atlanta P. & S. 06, sb Ga. 06, West Point.

(10) CHEROKEE COUNTY

Tuscaloosa 1887

President—J. F. Emerson
Vice-President—W. J. Campbell
Secretary-Treasurer—S. C. Tatum
County Health Officer—Samuel C. Tatum

*See also Lee County.

Censors—S. C. Tatum, Chairman, Center; J. F. Emerson, Spring Garden; W. J. Campbell, Center.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Campbell, William J., mc Tenn. 31, sb 31, Center.
Emerson, Jefferson Forrest, mc Grant 95, cb Marshall 97, Spring Garden.

Tatum, Samuel Carter, mc Vanderbilt 93, cb 93, Center.
White, William Walden, mc Emory 24, recip. Ga. 25, Center.

Total 4

PHYSICIANS NOT MEMBERS

Grambling, Joseph W., mc Ala. 01, cb Franklin 01, Center.
Total 1

(11) CHILTON COUNTY

Selma 1879

President—C. O. Lawrence Clanton
Vice-President—J. P. Hayes Clanton
Secretary-Treasurer—E. M. Moore Clanton
County Health Officer—E. M. Moore* Clanton

Censors—J. P. Hayes, Chairman, Clanton; R. J. Eiland, Clanton; W. C. Golden, Clanton; C. R. Moore, Clanton; C. O. Lawrence, Clanton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Day, Edward, mc Tulane 11, sb 16, Maplesville.
Eiland, John Daniel, mc Univ. Nashville 11, sb 12, Verbena.

Eiland, Robert John, ng, sb 07, Clanton.
Franklin, Horace G., mc Louisville 30, sb 30, Thorsby.
Golden, William C., mc LSU 34, recip. Miss. 37, Clanton.
Gragg, Vincent Jones, mc Tulane 08, sb 06, Magnolia Springs.

Hayes, Julius Poe, mc Memphis Hosp. 96, cb 96, Clanton.
Lawrence, Claud O., mc Emory 17, sb 17, Clanton.

Moore, Charles R., mc Tulane 35, sb 35, Clanton.
Parnell, Charles Nicholas, mc Ala. 91, cb 91, Maplesville.
Strock, Charles Stewart, mc Vanderbilt 04, cb 04, Verbena.

Total 11

PHYSICIANS NOT MEMBERS

None.

(12) CHOCTAW COUNTY

Selma 1879

President—R. W. Shaw Gilbertown
Vice-President—W. J. Barber Butler
Secretary-Treasurer—T. M. Littlepage Butler
County Health Officer—T. M. Littlepage Butler

Censors—H. W. Robinson, Chairman, Edna; R. W. Shaw, Gilbertown; W. J. Barber, Butler; T. M. Littlepage, Butler; J. W. Rudder, Toxey.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Barber, William J., mc Tulane 29, sb 29, Butler.
Gully, Virgil S., mc Tulane 38, recip. La. 42, Butler. (S.)
Littlepage, Thos. M., mc Ala. 04, cb 04, Butler.
Miller, Samuel T., mc Ala. 01, cb Greene 04, Meridian, Miss.

Robinson, Henry W., mc Memphis Hosp. 01, cb 01, Edna.
Rudder, John W., mc Univ. Nashville 07, cb 07, Toxey.
Shaw, Rowell Wilbur, mc Memphis Hosp. 00, cb Washington 00, Gilbertown.

Total 7

*See also Autauga County.

PHYSICIANS NOT MEMBERS

Elliott, Thomas C., mc Tulane 37, sb 37, Butler. (S.)
Total 1

(13) CLARKE COUNTY

Greenville 1885

President—A. L. White Thomasville
Vice-President—W. S. Chapman Jackson
Secretary-Treasurer—R. D. Neal Grove Hill
County Health Officer—R. D. Neal (Act.) Grove Hill

Censors—A. L. White, Chairman, Thomasville; J. T. Pugh, Grove Hill; W. S. Chapman, Jackson; J. C. Godbold, Whatley; R. D. Neal, Grove Hill.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Bedsole, James Goodman, mc Vanderbilt 11, sb 11, Jackson.

Chapman, Leland W., mc Ala. 11, sb 11, Jackson.

Chapman, Will Stewart, mc Emory 24, sb 24, Jackson.

Connell, Isee Lee, mc Univ. Chicago 29, recip. Ill. 31, Grove Hill. (S.)

Davidson, James S., mc Tulane 29, recip. La. 39, Thomasville.

Godbold, John Cooper, Jr., mc Ala. 11, sb 11, Whatley.

Irons, Richard Allen, mc Emory 24, sb 24, Thomasville.

McCrary, Gaines C., mc Ala. 07, sb 07, Jackson.

Neal, Ralph Dewey, mc Emory 23, recip. Ga. 24, Grove Hill.

Nichols, Cobb, mc Ala. 98, cb 01, Carlton.

Pugh, John T., mc Vanderbilt 97, cb 97, Grove Hill.

Robinson, Amos N., mc Ala. 93, cb 94, Coffeetown.

Shaw, Robert E., mc Ala. 98, sb 99, Whatley.

Warren, Claude M., mc Univ. Louisville 38, recip. Ky. 39, Jackson. (S.)

White, Alexander L., mc Memphis Hosp. 98, cb 98, Thomasville.

Total 15

PHYSICIANS NOT MEMBERS

None.

(14) CLAY COUNTY

Selma 1879

President—J. S. Gay Ashland
Secretary-Treasurer—M. L. Shaddix Ashland
County Health Officer—M. L. Shaddix Ashland

Censors—J. L. Hilt, Chairman, Lineville; J. S. Gay, Ashland; M. L. Shaddix, Ashland; J. W. Jordan, Ashland; B. A. Stephens, Lineville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Cole, Leslie G., mc Tenn. 31, recip. Tenn. 32, Talladega.

Gay, Jas. S., mc Ala. 05, cb 05, Ashland.

Hilt, John L., mc Atlanta Sou. 89, cb 89, Lineville.

Johnson, Chester Earle, Jr., mc Univ. Col. 31, sb 31, Lineville. (S.)

Jordan, Joseph Wiley, mc Atlanta 91, cb 87, Ashland.

Owens, Arthur H., mc Ala. 05, cb 05, Ashland.

Shaddix, Marion L., mc Ala. 10, sb 10, Ashland.

Stephens, Albert R., mc Atlanta Sou. 88, cb 88, Delta.

Stephens, Burrell Anderson, mc Ala. 92, cb 92, Lineville.

Total 9

PHYSICIANS NOT MEMBERS

Killgore, James J., mc Memphis Hosp. 01, cb 01, Wadley.
Total 1

(15) CLEBURNE COUNTY

Selma 1884

President—L. R. Wright Heflin
Vice-President—J. L. Dorough Heflin
Secretary-Treasurer—F. R. Wood Heflin
County Health Officer—J. L. Dorough Heflin

Censors—L. R. Wright, Chairman, Heflin; F. R. Wood, Heflin; J. L. Dorough, Heflin.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Dorough, John L., mc Okla. 15, recip. Okla. 21, Heflin.
Wood, Frank Richard, mc Chattanooga 01, cb Randolph 01, Heflin.
Wright, Lee Roy, mc Univ. Nashville 00, cb 00, Heflin.
Total 3

PHYSICIANS NOT MEMBERS

None.

(16) COFFEE COUNTY

Greenville 1885

President—E. G. Bragg Jack
Vice-President—D. A. Bush New Brockton
Secretary-Treasurer—J. S. DuBois Enterprise
County Health Officer—G. L. Weidner Elba

Censors—C. P. Hayes, Chairman, Elba; E. L. Gibson, Enterprise; D. A. Bush, New Brockton; B. F. Thrower, Enterprise; E. G. Bragg, Jack.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Bragg, Eugene G., mc Ala. 14, sb 15, Victoria (mail Jack).
Braswell, William Cicero, mc Tulane 09, sb 09, Elba.
Bush, David A., mc Ala. 07, sb 07, New Brockton.
Crook, William Randolph, mc Chattanooga 02, cb 02, Elba.
DuBois, James S., mc Tulane 37, sb 37, Enterprise.
Gibson, Edward Lee, mc Ala. 13, sb 13, Enterprise.
Harrison, King William, mc Ala. 96, cb Lowndes 97, Enterprise.
Hayes, Charles Phillip, mc Louisville 06, cb Houston 06, Elba.
Massey, Bartlett Jones, mc Ala. 03, sb Jefferson 03, Enterprise.
Stanley, William Alfred, mc Ala. 12, cb 12, Veterans' Facility, Montgomery.
Thrower, Benjamin Franklin, mc Ala. 11, sb 12, Enterprise.
Weidner, Garland L., mc Univ. Louisville 27, recip. Ky. 42, Elba.
Total 12

PHYSICIANS NOT MEMBERS

Fussell, James A., mc Tenn. 25, recip. Tenn. 26, New Brockton. (License revoked March 6, 1945.)
Total 1

(17) COLBERT COUNTY

Montgomery 1881

President—W. R. Trapp Tuscumbia
Vice-President—W. M. Pierce Tuscumbia
Secretary-Treasurer—R. E. Harper Tuscumbia
County Health Officer—R. E. Harper Tuscumbia

Censors—Loren Gary, Jr., Chairman, Tuscumbia; C. R. Whitman, Tuscumbia; W. H. Blake, Jr., Sheffield; W. M. Pierce, Tuscumbia; G. F. Littlepage, Sheffield.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Blake, Wyatt Heflin, Jr., mc Vanderbilt 21, sb 21, Sheffield.
Brackin, Odie D., mc Univ. Ark. 40, recip. Ark. 41, Tuscumbia.

Cox, D. D., mc Rush 29, sb 31, Sheffield.
Finley, William Albert, ng, sb 09, Cherokee.
Gary, Loren, Jr., mc Univ. Ga. 32, recip. Ga. 41, Tuscumbia.
Gary, Robert Eugene, mc Univ. Ga. 32, recip. Ga. 37, Tuscumbia.
Griffith, Howard Asa, mc Ala. 07, cb Jefferson 07, Sheffield.
Harper, Robt. Edwin, mc S. C. 25, recip. S. C. 28, Tuscumbia.
Hufstедler, Joe G., mc Univ. Tenn. 34, recip. Tenn. 44, Wilson Dam.
Littlepage, George Frederick, mc Tulane 09, sb 07, Sheffield.
Maxwell, Walter J., mc Univ. South 01, cb Tuscaloosa 01, Sheffield.
McGrath, William Edward, mc Ala. 20, sb 20, Sheffield.
Pierce, William M., mc Memphis Hosp. 03, cb Cullman 04, Tuscumbia.
Trapp, Walter R., mc Emory 32, recip. Miss. 33, Tuscumbia.
Whitman, Clayborne Russell, mc Ala. 09, sb 09, Tuscumbia.
Wright, Rufus Denson, mc Tenn. 29, sb 29, Leighton.
Total 16

PHYSICIANS NOT MEMBERS

Palmer, Chas. R., mc Tenn. 15, sb 15, Sheffield. (Retired.)
Ruffin, W. L. (col.), mc Leonard 10, cb Montgomery 10, Sheffield.
Total 2

(18) CONECUH COUNTY

Selma 1879

President—R. W. Stallworth Evergreen
Vice-President—J. W. Hagood Evergreen
Secretary-Treasurer—E. L. Kelly Evergreen
County Health Officer—E. L. Kelly Evergreen

Censors—J. W. Hagood, Chairman, Evergreen; E. L. Stallworth, Evergreen; U. L. Jones, Brooklyn; R. W. Stallworth, Evergreen; W. R. Carter, Repton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Carter, William Robert, mc Emory 24, sb 24, Repton.
Hagood, John W., mc Ala. 98, cb Lowndes 98, Evergreen.
Hendrix, R. Walker, mc Tulane 33, recip. La. 34, Evergreen. (S.)
Jones, Urban Louis, mc Missouri 04, cb Geneva 04, Brooklyn.
Kelly, Edward Lamar, mc Ala. 00, cb 00, Evergreen.
Newton, Guy Guerdon, mc Ala. 97, cb 97, Evergreen.
Stallworth, Emmet Lemuel, mc Ala. 94, cb 94, Evergreen.
Stallworth, Robert W., mc Emory 29, sb 29, Evergreen.
Total 8

PHYSICIANS NOT MEMBERS

None

(19) COOSA COUNTY

Birmingham 1883

President—E. Argo Goodwater
Secretary-Treasurer—W. H. Goff Rockford
County Health Officer—C. S. Cotlin* Rockford

Censors—W. H. Goff, Chairman, Rockford; Eugene Argo, Goodwater.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Argo, Eugene, mc Vanderbilt 91, cb 91, Goodwater.
Goff, William Hunter, mc Vanderbilt 35, recip. Tenn. 38, Rockford.
Total 2

*See also Elmore County.

PHYSICIANS NOT MEMBERS

Johns, Stanley W., mc Ala. 13, recip. Ga. 21, Goodwater.
Total 1

(20) COVINGTON COUNTY

Montgomery 1888

President—E. A. Ray Andalusia
Vice-President—J. C. Hurst Opp
Secretary-Treasurer—C. D. McLeod Andalusia
County Health Officer—C. D. McLeod Andalusia

Censors—D. J. Campbell, Chairman, Dozier, RFD; L. L. Parker, Andalusia; C. H. Chapman, Andalusia; H. W. Waters, Opp; G. L. Wood, Andalusia.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Campbell, Daniel J., mc Miss. 09, sb 09, Dozier, RFD.
Chapman, Charles Hicks, mc Tulane 09, sb 09, Andalusia.
Evers, Ray, mc Vanderbilt 38, recip. Tenn. 40, Andalusia.
Galloway, Fletcher W., mc Memphis Hosp. 03, cb Houston 03, Florida.
Hamner, Samuel C., mc Ala. 09, sb 10, Andalusia.
Holley, J. F., mc Emory 22, sb 22, Lockhart.
Hurst, John C., mc Emory 25, sb 25, Opp.
Kyzar, J. H., mc Tulane 13, sb 13, Andalusia.
MacLennan, Edward R., mc Emory 35, recip. Ga. 36, Opp. (S.)
McDonald, Juanita Bolton, mc Woman's Med. Col. of Pa. 41, sb 42, Andalusia.
McLeod, Coleman D., mc S. C. 33, sb 34, Andalusia.
Parker, Lorenzo Dowe, mc Ala. 01, cb 01, Andalusia.
Parker, Leslie L., mc LSU 40, recip. La. 41, Andalusia.
Ray, Elgin A., mc Tulane 27, sb 27, Andalusia.
Waters, Hinton W., mc Ala. 13, sb 13, Opp.
Wood, Gordon L., mc Ala. 11, sb 11, Andalusia.
Woodley, Lawrence S., mc Tulane 37, sb 37, Andalusia. (S.)
Young, Ferrin, mc Vanderbilt 09, sb 09, Florida.
Total 18

PHYSICIANS NOT MEMBERS

Dowdy, Robert W., mc Tenn. 91, cb Randolph 91, Opp. Rt. 3.
Ham, Nelson M., mc Ala. 98, cb Coffee 98, Opp, Rt. 3.
Total 2

(21) CRENSHAW COUNTY

Mobile 1882

President—J. C. Ford Luverne
Vice-President—L. A. Windham Luverne
Secretary-Treasurer—J. O. Foster Luverne
County Health Officer—Jas. O. Foster Luverne

Censors—H. C. Nickson, Chairman, Brantley; H. S. Abercrombie, Petrey; F. J. Lee, Luverne; L. A. Windham, Luverne.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Abercrombie, Henry S., ng, sb 98, Petrey.
Ford, Julian C., mc P. & S. St. Louis 96, cb 96, Luverne.
Foster, James Oscar, mc P. & S. Atlanta 06, cb 06, Luverne.
Lee, Frank J., mc Ala. 08, sb 08, Luverne.
Nickson, Hugh Clare, mc Univ. Louisville 32, recip. Mo. 35, Brantley.
Watkins, Martin L., mc Vanderbilt 99, cb 99, Glenwood.
Windham, Lewis A., mc Atlanta 16, sb 16, Luverne.
Total 7

PHYSICIANS NOT MEMBERS

Bell, Walter Houston, mc Univ. Nashville 06, cb 06, Dozier.
Total 1

(22) CULLMAN COUNTY

Anniston 1886

President—E. G. Sandlin Holly Pond
Vice-President—R. B. Dodson Cullman
Secretary-Treasurer—M. S. Whiteside Cullman
County Health Officer—M. S. Whiteside Cullman

Censors—J. G. Daves, Chairman, Cullman; V. P. Hughes, Cullman; R. A. Culpepper, Cullman; J. C. Martin, Cullman; F. C. Stitt, Cullman.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Beatty, Thomas D., mc Rush 36, recip. Wis. 39, Cullman. (S.)
Camp, William A., mc Emory 41, sb 41, Cullman. (S.)
Cornelius, L. B., mc Ala. 12, sb 13, Cullman, Rt. 5.
Culpepper, Rufus Alva, mc Chicago M. & S. 14, sb 15, Cullman.
Daves, James G., mc Emory 20, sb 20, Cullman.
Dodson, Robert Bruce, mc Ala. 13, sb 13, Cullman.
Gross, Chas. M., mc Ala. 08, sb 08, Cullman, Rt. 3.
Gross, Robert Merrill, mc Tenn. 41, recip. Tenn. 43, Cullman.
Hays, Luther, mc Chattanooga 00, cb 01, Cullman.
Herrin, Charles Edward, mc Chattanooga 02, cb 02, Cullman.
Hughes, Virgil P., mc Emory 26, sb 26, Cullman.
Markheim, Herbert R., mc New York 38, NBE 40, Cullman. (S.)
Martin, James Cordie, mc Chattanooga 05, cb Morgan 05, Cullman.
McAdory, Edward Dudley, mc Ala. 14, sb 15, Cullman.
Rowe, George T., mc Loyola 28, sb 29, Hanceville.
Sandlin, E. G., mc Vanderbilt 07, sb 06, Holly Pond.
Stitt, Frank C., mc Univ. Ark. 28, sb 28, Cullman.
Whiteside, M. S., mc Tulane 20, sb 20, Cullman.
Wood, James W., mc P. & S. Atlanta 97, cb Clay 97, Hanceville.
Total 19

PHYSICIANS NOT MEMBERS

Graf, Charles Christopher, mc Ala. 13, sb 14, Steppville. (Retired.)
Hale, Prior, old law, cb Morgan 80, Vinemont, Rt. 2. (Retired.)
Head, Walter H., mc Tulane 24, recip. La. 27, Cullman.
Winn, John Thomas, mc Tenn. 93, cb 93, Baileyton. (Retired.)
Total 4

(23) DALE COUNTY

Tuscaloosa 1887

President—W. A. Parrish Midland City
Vice-President—A. D. Matthews Ozark
Secretary-Treasurer—W. L. Orr Ozark
County Health Officer—W. L. Orr Ozark

Censors—A. D. Matthews, Chairman, Ozark; W. A. Parrish, Midland City; Moses McGhee, Daleville; H. C. Stovall, Pinckard.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Holman, Norman Willard, mc Emory 35, recip. Ga. 36, Ozark.
Matthews, Augustus Douglas, mc Ala. 11, sb 13, Ozark.
McGhee, Moses, mc Atlanta 98, cb Henry 06, Daleville.
Orr, William Lucius, mc Baltimore 04, recip. Ga. 30, Ozark.
Parrish, William A., mc Univ. Nashville 09, sb 10, Midland City.
Smith, Gordon Royce, mc Tulane 21, sb 21, Ozark. (S.)
Stovall, H. C., mc Atlanta 08, sb 09, Pinckard.
Total 7

PHYSICIANS NOT MEMBERS

Espy, Curtis, mc Univ. South 04, cb Henry 04, Midland City.
Garrett, James DeWitt, mc Tulane 12, sb 12, Midland City.
Pruett, David P., mc Ala. 06, cb Bullock 06, Newton.
Total 3

(24) DALLAS COUNTY
Montgomery 1875

President—W. E. Ehlert Selma
Vice-President—G. T. Edwards Selma, Rt. 1
Secretary-Treasurer—L. T. Lee Selma
County Health Officer—L. T. Lee Selma

Censors—P. Y. Donald, Chairman, Selma; J. S. Chisolm, Selma; W. W. Burns, Selma; D. H. Doherty, Selma; J. P. Chapman, Selma.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Alison, James Fairly, mc Tulane 23, sb 23, Selma.
Alison, Samuel Blakemore, mc Ky. 89, cb 93, Minter.
Bayne, Rembert D., mc Tulane 27, sb 27, Selma.
Burns, William Wilkes, mc Tulane 15, sb 16, Selma.
Caine, V. H., mc Ala. 92, cb Wilcox 92, Orrville.
Callaway, Eugene, mc Univ. Va. 04, Bellevue 05, sb 10, Selma.
Chapman, Jesse P., mc Ala. 12, sb 12, Selma.
Chisolm, James Satterfield, mc Tulane 05, cb 06, Selma.
Chisolm, Jos. Raymond, mc Tulane 16, recip. La. 23, Marion Junction.
Chisolm, Robert Patrick, mc Ala. 93, cb 93, Selma, Rt. 4.
DeRamus, William Henry, mc Tulane 31, recip. La. 36, Selma. (S.)
Doherty, Drayton H., mc Johns Hopkins 15, sb 15, Selma.
Donald, Pressly Young, mc Tulane 15, sb 15, Selma.
Edwards, Daniel B., mc Ala. 98, cb 98, Tyler, RFD.
Edwards, Geo. Traylor, mc Ala. 12, sb 12, Selma, Rt. 1.
Ehlert, Wm. Emile, mc Tulane 38, recip. La. 42, Selma.
Feulner, Charles Daniel, mc Ky. 05, sb 06, Selma.
Grayson, Richard J., mc Tulane 26, sb 26, Selma. (S.)
Harper, William Frantz, mc Harvard 22, sb 23, Selma.
Howell, Julian P., mc Tulane 35, sb 35, Selma. (S.)
Kenan, James, mc Univ. Va. 97, cb 04, Selma.
Kirkpatrick, Samuel McCurdy, mc Tulane 29, sb 29, Selma. (S.)

Lee, Lucien Tennent, mc Ala. 04, cb Barbour 04, Selma.
Long, Randolph N., mc Tulane 35, recip. La. 37, Selma.
Luckie, Kenneth Earl, mc Tulane 27, sb 27, Selma.
Martin, Jesse H., mc Memphis Hosp. 10, sb 10, Selma.
Martin, Thomas Marion, mc Vanderbilt 99, cb Chilton 99, Plantersville.
Moore, Lawrence Henry, mc Ala. 01, cb 01, Orrville.
Moseley, Samuel O. mc Tulane 20, sb 21, Selma.
Skinner, Ira Clifton, mc Ala. 01, cb 01, Selma.
Skinner, Marcus M., mc Ala. 12, sb 12, Selma.
Smith, Josiah H., mc Johns Hopkins 31, recip. Md. 40, Selma. (S.)
Stuart, Wm. W., mc Ky. 94, cb Wilcox 94, Selma, Rt. 1.
Wallace, Archibald D., mc Memphis Hosp. 07, cb Autauga 07, Plantersville.
Williams, J. Richard, mc Tulane 31, sb 31, Selma.
Total 35

PHYSICIANS NOT MEMBERS

Dinkins, Pauline (col.), mc Woman's, Pa. 19, sb 19, Selma.
Mason, David A., mc Md. 04, sb 04, Selma.
Patton, Madison Knox, mc Tulane 91, cb Greene 91, Selma. (Retired.)
Schmitz-Dumont, Isabella M., mc Woman's Med. Col., Pa., 39, recip. Pa. 44, Selma.
Strickland, Mack Milton, mc Ala. 00, cb Lowndes 01, Selma, RFD. (Retired.)
Walker, Nathaniel D. (col.), mc Leonard 13, sb 15, Selma
Total 6

(25) DeKALB COUNTY
Greenville 1895

President—Briggs Parris Geraldine
Vice-President—J. E. Buzbee Ft. Payne
Secretary-Treasurer—E. N. Haller Ft. Payne
County Health Officer—R. F. Elrod (Act.) Ft. Payne

Censors—Briggs Parris, Chairman, Geraldine; R. F. Elrod, Ft. Payne; T. H. Appleton, Collinsville; M. T. Floyd, Ft. Payne; J. E. Buzbee, Ft. Payne.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Appleton, Thomas Hayne, mc Chattanooga 92, cb 92, Collinsville.
Buzbee, J. E., mc Ala. 08, sb 10, Ft. Payne.
Casey, M. L., mc Chattanooga 01, cb Marshall 01, Henagar.
Elrod, Robert F., mc Chattanooga 05, cb Russell 05, Ft. Payne.
Floyd, Milton Tucker, mc Montezuma 98, cb Lee 99, Ft. Payne.
Guest, Reuben John, Jr., mc Emory 31, recip. Ga. 32, Ft. Payne.
Haller, Edwin N., mc Tulane 22, recip. Tenn. 42, Ft. Payne.
Hansard, William Simeon, mc Chattanooga 07, cb 07, Henagar, RFD.
Holler, Carl A. F., mc Northwestern 21, recip. Iowa 38, Ft. Payne. (S.)
Killian, Claud Dallas, mc Ala. 13, sb 14, Ft. Payne.
Lavender, Claude B., mc Memphis Hosp. 08, sb 08, Crossville.
Marsh, Jos. S., mc Chicago M. & S. 17, sb 18, Collinsville.
Parris, Briggs, mc Tenn. 13, sb 14, Geraldine.
Richey, Clinton H., mc Louisville 29, recip. Tenn. 31, Valley Head.
Wilson, Dilimus Wesley, mc Chattanooga 00, cb Marshall 01, Fyffe, Rt. 2.
Wright, Duward O., mc Northwestern 30, sb 30, Ft. Payne. (S.)
Total 16

PHYSICIANS NOT MEMBERS

Bogle, Jos. Hoge, mc Vanderbilt 00, cb 00, Collinsville.
Clayton, A. L., mc Chattanooga 95, cb 95, Fyffe.
Haggard, Daniel Carr, mc Chattanooga 10, recip. Tenn. 20, Sylvania.
Hayes, Charles, mc Chattanooga 03, cb Morgan 03, Fyffe.
Total 4

(26) ELMORE COUNTY
Birmingham 1877

President—J. F. Sewell Wetumpka
Vice-President—O. C. Powell Titus
Secretary-Treasurer—C. S. Cotlin Wetumpka
County Health Officer—C. S. Cotlin Wetumpka

Censors—J. F. Sewell, Chairman, Wetumpka; O. C. Powell, Titus; W. M. Owsley, Eclectic.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Corrington, Dale D., mc Rush 21, recip. Illinois 26, Tallassee.
Cotlin, Chas. S., mc Tenn. 30, sb 31, Wetumpka.
Dunn, Julius E., mc Univ. Louisville 33, recip. Ky. 36, Wetumpka.
Gresham, George L., mc Tulane 05, cb Covington 05, Speigner.
Harmon, James Samuel, mc Chattanooga 07, cb 07, Chickasaw (Mobile).
Huddleston, Robert Lee, mc Ga. 90, cb 90, Deatsville.
Lett, Ed. R., mc Louisville 05, cb 07, Tallassee.
Majure, Ernest Odell, mc Emory 32, recip. Miss. 35, Wetumpka. (S.)
Moore, Ernest G., mc LSU 33, recip. La. 35, Tallassee.

Owsley, Lawrence Hayes, mc Emory 40, recip. Va. 44, Eclectic. (S.)
Owsley, W. M., mc Ala. 14, sb 14, Eclectic.
Powell, Oscie C., mc Chattanooga 00, cb 02, Titus.
Sewell, John Ferris, mc Vanderbilt 21, sb 21, Wetumpka.
Total 13

PHYSICIANS NOT MEMBERS

Boswell, Franklin A., mc Ala. 00, cb Pike 00, Elmore.
Milner, Samuel R., mc Ala. 94, cb 97, Eclectic, Rt. 1.
Total 2

(27) ESCAMBIA COUNTY

Greenville 1886

President—W. L. Abernethy Flomaton
Vice-President—J. P. Stallworth Canoe
Secretary-Treasurer—J. O. Lisenby Atmore
County Health Officer—W. B. Nelson* Brewton

Censors—A. F. Holley, Chairman, Brewton; J. O. Lisenby, Atmore; J. P. Stallworth, Canoe; G. W. Salley, Atmore; V. Q. Rawls, Brewton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Abernethy, William Lordin, mc Ala. 94, cb Monroe 94, Flomaton.
Abrams, Maurice J., mc Johns Hopkins 30, recip. Md. 33, Brewton. (S.)
Holley, Al Fonto, mc Louisville 33, recip. Ky. 35, Brewton.
Lisenby, Jas. Otis, mc Tulane 25, recip. La. 27, Atmore.
Marlette, Geo. C., mc Ala. 16, sb 16, New Orleans.
Murphy, Iva G., mc Univ. Ill. 34, recip. Cal. 40, Brewton. (S.)
Rawls, Vance Q., mc Univ. Louisville 29, recip. Ky. 35, Brewton.
Salley, Geo. W., mc Tenn. 03, cb Butler 03, Atmore.
Stallworth, James Patrick, mc P. & S. Atlanta 07, cb 07, Canoe.
Treherne, Alfred James, mc Louisville 32, recip. Ky. 35, Atmore. (S.)
Total 10

PHYSICIANS NOT MEMBERS

Mason, Francis Henry, mc Ala. 91, cb Monroe 91, Brewton.
McKinley, Charles F., mc Ala. 07, cb Monroe 07, Atmore.
Peavy, Julius Franklin, Jr., mc Ala. 12, sb 12, Atmore.
Tippin, Philip Henry Mulcahy, mc Ala. 94, cb 94, Brewton.
Total 4

HONORARY MEMBER

Turberville, J. S., Century, Fla.

(28) ETOWAH COUNTY

Eufaula 1878

President—F. W. McCorkle Gadsden
Vice-President—Mercer Rowe Gadsden
Secretary-Treasurer—D. E. Goley Gadsden
County Health Officer Gadsden

Censors—E. K. Hanby, Chairman, Attalla; J. L. Brown, Gadsden; W. L. Miller, Gadsden; J. S. Bobo, Gadsden; O. R. Grimes, Gadsden.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Anderson, William, mc Memphis Hosp. 06, sb 05, Glencoe, Rt. 2.
Anderson, William O. mc Univ. Ark. 38, recip. Ark. 39, Alabama City. (S.)

*See also Baldwin County.

Bass, Herschel Winston, mc Johns Hopkins 06, sb 06, Gadsden.
Bass, John B., mc Johns Hopkins 38, recip. Md. 40, Gadsden. (S.)
Blair, Ezekiel S., mc Univ. Tenn. 10, recip. Tenn. 42, Gadsden.
Bobo, James E., mc Tenn. 38, recip. Tenn. 40, Gadsden. (S.)
Bobo, John S., mc Vanderbilt 24, recip. Tenn. 25, Gadsden.
Brown, James M., mc Ala. 89, cb Montgomery 89, Gadsden.
Brown, Joseph Lucien, mc P. & S. Baltimore 18, sb 19, Gadsden.
Burns, Chas. R. D., mc Univ. Ark. 38, recip. Ark. 40, Alabama City. (S.)
Cantrell, Wilson T., mc Ky. 06, cb Marion 06, Alabama City.
Carraway, Alfred, mc Ala. 15, sb 22, Gadsden.
Clark, Ralph Denson, mc Columbia 27, Nat. Bd. Ex. 30, Gadsden.
Cross, Elias Howell, Jr., mc Vanderbilt 26, recip. Tenn. 27, Gadsden.
DeJanney, Nicholas H., mc Georgetown Univ. 31, recip. N. J. 42, Gadsden.
Faucett, DeWitt, mc P. & S. Baltimore 09, sb 09, Gadsden.
Faucett, George L., mc P. & S. Baltimore 03, cb 03, Gadsden.
Finney, James O., mc Vanderbilt 33, recip. Tenn. 36, Gadsden. (S.)
Ford, Henry Grady, mc Vanderbilt 23, sb 24, Gadsden. (S.)
Ford, Joseph Wesley, mc Okla. 31, recip. Okla. 37, Gadsden, Rt. 2. (S.)
Ford, William F., mc Vanderbilt 94, cb 95, Gadsden, Rt. 2.
Frank, Herman W., mc Tulane 27, recip. La. 30, Gadsden.
Frantz, William E., mc Tulane 37, recip. La. 39, Gadsden.
Gillespie, J. P., Jr., mc Emory 27, recip. Ga. 29, Gadsden. (S.)
Gipson, Amos C., mc Ill. 27, sb 27, Gadsden.
Goley, Donald Earl, mc Med. Evangelists 40, recip. Pa. 43, Gadsden.
Graves, Alex Wilson, mc Ala. 16, sb 16, Gadsden.
Grimes, Ormond R., mc Emory 30, sb 30, Gadsden.
Guice, Charles Lee, mc Grant 93, cb Dale 93, Gadsden.
Hanby, Elmus K., mc Ala. 02, cb St. Clair 02, Attalla.
Holladay, Joel J., Jr., mc N. Y. U. 34, sb 35, Gadsden. (S.)
Hughes, Miles Preston, mc Vanderbilt 06, sb 05, Gadsden.
Isbell, Euclid A., mc Tulane 33, sb 34, Gadsden.
Kilpatrick, Lewis Alex, mc Ala. 09, sb 09, E. Gadsden.
Lawson, Chas. Lloyd, mc Univ. Tenn. 36, recip. Tenn. 39, Gadsden.
Lawson, Nettie Black, mc Univ. Tenn. 37, recip. Tenn. 40, Gadsden.
Leach, James E., mc Univ. Nashville 00, cb Blount 00, Gadsden.
Little, Edwin G., mc Ala. 05, sb 05, Gadsden.
Lonnergan, Leilas Ragan, Jr., mc Tulane 34, recip. La. 36, 6614 7th Place, N. W., Washington, D. C. (S.)
McCord, Bert, mc Northwestern 28, sb 29, Gadsden.
McCorkle, Frank W., mc Jefferson 17, sb 17, Gadsden.
McDiarmid, Thos. Scott, mc Ala. 09, sb 10, Gadsden.
McElroy, James Mahlon, mc Univ. South 01, cb Sumter 02, Attalla.
McEver, Edward A., mc Univ. Tenn. 25, recip. Tenn. 42, Gadsden. (S.)
McNabb, John Tate, mc Tenn. 34, recip. Tenn. 38, Alabama City. (S.)
Meneray, Wilbur E., mc Tulane 37, recip. La. 43, Gadsden.
Miller, William L., mc Johns Hopkins 23, Nat. Bd. Ex. 28, Gadsden.
Morgan, J. Orville, mc Atlanta 16, sb 17, Gadsden.
Murphree, Claud L., mc Ala. 02, cb 02, Birmingham.
Nicholson, Lemuel B., mc Vanderbilt 15, sb 17, Gadsden.
Noble, William, mc Emory 38, recip. Cal. 40, Attalla. (S.)
Powell, H. B., mc Ala. 10, sb 10, Gadsden.
Ralls, Arthur W., mc P. & S. Atlanta 02, cb 02, Gadsden.
Rowan, Walter William, mc Atlanta 15, sb 15, Attalla.

Rowe, Mercer, mc Ala. 17, sb 17, Gadsden.
Samuel, Ira J., mc Univ. Nashville 08, sb 14, Altoona.
Savage, Henry J., mc Tulane 01, cb Conecuh 02, Gadsden.
Sheppard, John T., mc Vanderbilt 29, recip. Tenn. 33, Gadsden. (S.)
Sigrest, Otho Randolph, mc Ala. 08, sb 08, Attalla.
Silvey, Gordon E., mc Tenn. 10, sb 10, Gadsden.
Simpson, S. Paul, mc Univ. Louisville 26, recip. Ky. 27, Alabama City. (S.)
Simpson, Wyatt Collier, mc Harvard 31, Nat. Bd. Ex. 38, Gadsden.
Watwood, James A., mc Emory 25, sb 25, Gadsden.
Total 63

PHYSICIANS NOT MEMBERS

Coffey, Geo. W. (col.), mc Howard 03, cb Lauderdale 06, Gadsden.
Gramling, Arthur B., mc Md. 04, cb 04, Attalla.
Stewart, James Wellington (col.), mc Meharry 44, recip. Tenn. 45, Gadsden.
Towns, John Bunyon (col.), mc Meharry 23, sb 23, Gadsden.
Total 4

(29) FAYETTE COUNTY

Selma 1879

President—J. D. Scrivner Berry
Vice-President—J. B. Robertson Fayette
Secretary-Treasurer—J. H. Ashcraft Fayette
County Health Officer—J. H. Ashcraft Fayette

Censors—D H. Wright, Chairman, Berry; A. L. Blakeney, Newtonville; B. W. McNease, Fayette; A. C. Branyon, Fayette; J. D. Scrivner, Berry.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Ashcraft, James Harvey, mc Ala. 05, cb Pickens 05, Fayette.
Barber, Homer Douglas, mc LSU 35, recip. Ga. 39, Fayette. (S.)
Blakeney, A. Lanthus, mc Grant 07, cb Lamar 07, Newtonville.
Branyon, A. Curt, mc Memphis Hosp. 03, cb Lamar 03, Fayette.
McNease, Benjamin W., mc Pa. 24, sb 25, Fayette.
Robertson, John Banks, mc Tulane 34, sb 35, Fayette.
Scrivner, J. D., mc Ala. 14, sb 14, Berry.
Stewart, Guy E., mc Ala. 04, cb Walker 04, Fayette.
Wright, David H., mc Vanderbilt 08, sb 08, Berry.
Total 9

PHYSICIANS NOT MEMBERS

Young, James D., mc Memphis Hosp. 94, cb Lamar 94, Fayette. (Retired.)
Total 1

(30) FRANKLIN COUNTY

Tuscaloosa 1887

President—W. A. Gresham Russellville
Vice-President—O. O. Underwood Phil Campbell
Secretary-Treasurer—N. P. Underwood Russellville
County Health Officer—N. P. Underwood Russellville

Censors—F. R. Underwood, Chairman, Red Bay; A. J. Underwood, Spruce Pine; S. J. Snoddy, Russellville; Z. L. Weatherford, Red Bay; T. J. Glasgow, Russellville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Burns, John Dowdy, mc Tenn. 26, sb 26, Russellville.
Clayton, Price, mc Tulane 27, sb 27, Russellville.
Craig, William J., mc Tulane 25, recip. La. 37, 165 Elk Place, New Orleans 13.
Glasgow, Thomas Jefferson, mc Ala. 10, sb 10, Russellville.
Gresham, Walter Asa, mc Vanderbilt 00, cb 00, Russellville.

Snoddy, Samuel J., mc Emory 24, sb 24, Russellville.
Spruell, William Hugh, mc Tenn. 34, recip. Tenn. 35, Russellville. (S.)
Underwood, Andrew Jackson, mc Ala. 99, cb 01, Spruce Pine.
Underwood, Floyd R., mc Ala. 12, sb 12, Red Bay.
Underwood, Naomi Price, mc Grant 06, cb 06, Russellville.
Underwood, Oscar O., mc Chattanooga 04, cb 04, Phil Campbell.
Waldrep, Archie C., mc Louisville 93, cb 93, Red Bay.
Weatherford, Zadoc L., mc Tenn. 14, sb 16, Red Bay.
Wilson, William E., mc Tulane 24, recip. Tenn. 26, Russellville. (S.)
Total 14

PHYSICIANS NOT MEMBERS

Frederick, Ralph H., mc Univ. Tenn. 31, recip. Tenn. 38, Phil Campbell.
McCullar, James A., mc Vanderbilt 99, cb Winston 99, Russellville.
Total 2

(31) GENEVA COUNTY

Montgomery 1888

President—H. K. Tippins Geneva
Vice-President—I. L. Johnston Samson
Secretary-Treasurer—E. T. Brunson Samson
County Health Officer—G. L. Weidner* Geneva

Censors—H. C. Riley, Chairman, Coffee Springs; H. K. Tippins, Geneva; I. L. Johnston, Samson; C. P. Gay, Geneva; J. W. Beasley, Geneva.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Beasley, James W., mc Ala. 96, cb Pike 96, Geneva.
Brunson, Emmett T., mc Emory 21, sb 21, Samson.
Gay, Coleman P., mc Atlanta Southern 97, cb Randolph 97, Geneva.
Johnston, Ira L., mc Memphis Hosp. 03, cb Pike 03, Samson.
Kelly, Alto Leon, mc Ala. 17, sb 18, Veterans' Bureau, Kansas City, Mo.
McEachern, Conley Pinkney, mc Ala. 96, cb Pike 96, Geneva.
Riley, Henry Clayton, mc Memphis Hosp. 03, cb Henry 03, Coffee Springs.
Stephens, Dudley D., mc Ala. 95, cb Dale 95, Slocomb.
Tankersley, Ernest, mc Louisville 07, cb Crenshaw 07, Samson.
Tippins, Henry K., mc Chicago P. & S. 08, sb 08, Geneva.
Tippins, James R., mc Chicago P. & S. 12, sb 14, Hartford.
Vaughan, Angus Edwin, mc Louisville 05, cb 05, Geneva, Rt. 2.
Williams, Keller Bell, mc Univ. South 07, sb 08, Hartford.
Windham, Samuel W., mc Washington Univ. 38, recip. Mo. 40, Geneva. (S.)
Total 14

PHYSICIANS NOT MEMBERS

Fleming, John C., mc Ala. 91, cb 95, Hartford.
Townsend, Alfred L., mc Univ. Nashville 99, cb Pike 99, Hartford.
Total 2

(32) GREENE COUNTY

Selma 1879

President—J. P. Smith Eutaw
Vice-President—D. H. Trice Boligee
Secretary-Treasurer—J. D. Smith Eutaw
County Health Officer—J. D. Smith (Acting) Eutaw

*See also Coffee County.

Censors—D. H. Trice, Chairman, Boligee; H. B. Klie, Forkland; J. P. Smith, Eutaw; R. S. Lucius, Eutaw; J. D. Smith, Eutaw.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Klie, H. B., mc Tulane 00, cb Marengo 00, Forkland.
Lucius, Richard Spurgeon, mc P. & S. Atlanta 04, cb 04, Eutaw.
Minot, Dobbs, mc Tulane 35, sb 35, Eutaw. (S.)
Smith, James Donald, mc N. Y. Univ. 36, recip. N. Y. 38, Eutaw.
Smith, Joe P., mc Emory 34, recip. Miss. 36, Eutaw.
Snelling, David B., mc Harvard 29, recip. S. C. 35, Eutaw. (S.)
Trice, Daniel Hall, mc Louisville 03, cb Choctaw 03, Boligee.
Weissinger, William J., mc Tulane 11, sb 11, Eutaw.
Total 8

PHYSICIANS NOT MEMBERS

Legare, Julien Kent, mc Univ. N. Y. 86, cb 87, Forkland.
Moore, George Amos, mc Ala. 90, cb Wilcox 90, Eutaw.
Thetford, Samuel Lewis, mc Tulane 06, sb Louisiana 06, Boligee.
Total 3

(33) HALE COUNTY

Montgomery 1875

President—I. H. Griffin	Moundville
Vice-President—C. K. Smith	Greensboro
Secretary-Treasurer—I. N. Jones	Greensboro
County Health Officer—I. N. Jones	Greensboro

Censors—T. J. Anderson, Chairman; Greensboro; C. K. Smith, Greensboro; E. T. Norman, Greensboro; I. H. Griffin, Moundville; T. P. Abernathy, Moundville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Abernathy, Thomas Pennie, mc Memphis Hosp. 99, cb 99, Moundville.
Allison, Grady M., mc Univ. Tenn. 10, recip. Tenn. 42, Gallion.
Anderson, Thos. J., mc Tulane 22, sb 22, Greensboro.
Griffin, Irvin H., mc Tulane 34, sb 35, Moundville.
Jones, Isaac N., mc Ala. 09, sb 10, Greensboro.
Norman, Eldridge T., mc Emory 26, sb 26, Greensboro.
Smith, Clarence K., mc Ala. 09, sb 09, Greensboro.
Total 7

PHYSICIANS NOT MEMBERS

None.

(34) HENRY COUNTY

Montgomery 1883

President—L. P. Shell	Abbeville
Vice-President—C. T. Jones	Newville
Secretary-Treasurer—R. H. Allen	Abbeville
County Health Officer—R. H. Allen	Abbeville

Censors—S. L. Burdeshaw, Chairman, Headland; L. P. Shell, Abbeville; T. J. Floyd, Abbeville; C. T. Jones, Newville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Allen, Ralph H., mc Atlanta 14, sb 27, Abbeville.
Burdeshaw, Shelby L., mc Univ. Nashville 08, sb 08, Headland.
Floyd, Thomas J., mc Tulane 07, cb Houston 07, Abbeville.
Jones, Carl T., mc Ala. 17, sb 17, Newville.

Martin, Carl T., mc Univ. Ga. 26, recip. Ga. 36, Headland. (S.)

Scott, Marvin, mc Ala. 05, cb 05, Headland.

Shell, James Robert, mc Tenn. 42, recip. Tenn. 43, Abbeville. (S.)

Shell, L. P., mc Vanderbilt 05, cb Butler 06, Abbeville.

Whigham, Arthur L., mc Ala. 10, sb 11, Newville.

Total 9

PHYSICIANS NOT MEMBERS

Scott, Walter, mc Atlanta 10, sb 14, Headland.

Total 1

(35) HOUSTON COUNTY

Talladega 1903

President—J. A. Campbell	Dothan
Vice-President—P. R. Flowers	Dothan
Secretary-Treasurer—W. T. Burkett	Dothan
County Health Officer—W. T. Burkett	Dothan

Censors—L. Hilson, Chairman, Dothan; I. C. Bates, Dothan; W. H. Turner, Dothan; R. D. Crawford, Dothan; S. G. Latiolas, Dothan.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Andress, David G., mc Chattanooga 04, cb Cullman 04, Madrid.
Bates, Irby Clyde, mc Ala. 11, sb 11, Dothan.
Burdeshaw, Henry B., mc Tulane 16, sb 19, Dothan.
Burkett, Wyatt Thomas, mc Tulane 09, sb 17, Dothan.
Campbell, James A., mc Okla. 15, sb 20, Dothan.
Cannady, Nicholas B., mc Jefferson 12, recip. N. C. 23, Dothan.
Chalker, Benjamin C., mc Georgia Eclectic 97, cb Geneva 97, Dothan.
Crawford, Robert D., Jr., mc Emory 30, pro forma USN 32, Dothan.
Davie, Mercer Stillwell, mc Tulane 09, cb 09, Dothan.
Ellis, John Thomas, mc Emory 16, sb 17, Dothan.
Flowers, James H., mc Baylor 05, cb 05, Newton, RFD.
Flowers, Paul Rutledge, mc Emory 39, recip. Ind. 43, Dothan.
Fowler, James T., mc S. C. 83, cb Henry 83, 2845 Carlisle Rd., Birmingham.
Granger, Frank G., mc Atlanta P. & S. 12, sb 12, Ashford.
Haisten, Douglas C., mc Vanderbilt 28, sb 29, Dothan.
Hicks, Dorman Marvin, mc Louisville 06, cb Pike 06, Cottonwood.
Hilson, Lewis, mc P. & S. Atlanta 09, sb 09, Dothan.
Keyton, J. Arthur, mc Tulane 16, sb 16, Dothan.
Latiolais, Sydney G., mc Tenn. 31, recip. Tenn. 35, Dothan.
Mazyck, Arthur, mc Univ. Va. 31, recip. Va. 34, Dothan.
McFatter, Theron K., mc Tulane 29, recip. La. 31, Dothan.
Moody, Earl F., mc Tulane 03, sb 03, Dothan.
Rowe, Mason C., mc Va. 35, recip. Va. 39, Dothan. (S.)
Thacker, Vincent J., mc Tulane 25, recip. La. 27, Dothan.
Turner, Wilson H., mc Northwestern 28, recip. Miss. 31, Dothan.
Wilkinson, John G., mc Tenn. 02, cb Tuscaloosa 02, Cottonwood.
Woods, Thomas B., mc Tulane 33, sb 33, Dothan. (S.)
Yarbrough, John Fletcher, mc Atlanta 92, cb Henry 92, Montgomery.
Total 28

PHYSICIANS NOT MEMBERS

Dasher, John M. (col.), mc Meharry 29, recip. Ga. 40, Dothan.

Lanford, Walter B., mc Ala. 06, cb Crenshaw 06, Columbia.
Ryalls, William Mann, mc Atlanta 87, cb Henry 97, Ashford.

Total 3

(36) JACKSON COUNTY

Mobile 1882

President—S. P. Hall Scottsboro
Vice-President—E. A. Browder Stevenson
Secretary-Treasurer—E. Julian Hodges Scottsboro
County Health Officer—Lee Weathington* Scottsboro

Censors—E. L. Trammell, Chairman, Dutton; M. H. Lynch, Scottsboro; G. E. Nye, Scottsboro; E. A. Browder, Stevenson; Rayford Hodges, Scottsboro.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Browder, Ernest A., mc Tenn. 36, recip. Tenn. 37, Stevenson.
Hall, Samuel P., Jr., mc Univ. Ga. 34, recip. Ga. 36, Scottsboro.
Hartung, Carl F., Jr., mc Grant 06, cb Cullman 06, Bridgeport.
Hodges, E. Julian, mc Emory 34, sb 34, Scottsboro.
Hodges, Rayford, mc Ala. 15, sb 15, Scottsboro.
James, Samuel H., mc Chattanooga 06, cb 06, Veterans' Hospital, Outwood, Ky.
Lynch, M. H., mc S. C. 28, recip. S. C. 30, Scottsboro.
Nye, George E., mc Chattanooga 06, cb DeKalb 06, Scottsboro.
Trammell, Edward Lee, mc Tenn. 33, recip. Tenn. 34, Dutton.
Vandiver, Horace G., mc Vanderbilt 15, sb 15, Princeton.
Williams, William C., mc Ala. 00, cb Mobile 00, Bridgeport.
Zimmerman, Albert Sidney, mc Univ. South 97, cb Lawrence 98, 55 S. Conception Street, Mobile.
Total 12

PHYSICIANS NOT MEMBERS

Bieeland, E. E., mc Barnes 03, cb Baldwin 05, Section.
Total 1

(37) JEFFERSON COUNTY

Birmingham 1877

President—Hughes Kennedy, Jr Birmingham
Vice-President—G. A. Denison Birmingham
Secretary-Treasurer—J. A. Ferry Birmingham
County Health Officer—G. A. Denison Birmingham

Censors—A. A. Walker, Chairman, Birmingham; J. W. Simpson, Birmingham; S. W. Collier, Birmingham; Ralph Morgan, Birmingham; Edward O'Connell, Birmingham.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Akin, John M., mc Emory 25, sb 26, 1117 W. 8th Ave., Birmingham.
Alford, Othar T., mc Univ. Tenn. 29, recip. Tenn. 37, 1403 N. 30th St., Birmingham.
Allgood, Homer Wilson, mc Ala. 12, sb 12, Fairfield.
Anderson, Henry L., mc Tulane 39, sb 39, Birmingham. (S.)
Anderson, Martin N., mc Univ. Tenn. 41, sb 42, 1601 N. 25th St., Birmingham.
Andrews, Neal L., mc Tulane 30, recip. La. 31, 2121 Highland Ave., Birmingham.
Anthony, J. C., mc Ala. 09, sb 09, Massey Bldg., Birmingham.
Applebaum, Samuel L., mc Univ. Tenn. 36, recip. Tenn. 39, Woodward Bldg., Birmingham.
Argo, John R., mc Vanderbilt 23, sb 23, Tarrant.
Armour, William S., mc Atlanta P. & S. 13, recip. Ga. 20, 900 S. 20th St., Birmingham.
Ashworth, Robert F., mc Louisville Hosp. 03, sb 03, Comer Bldg., Birmingham.
Atwood, Abner Lowe, mc Univ. Nashville 07, cb Franklin 07, Woodward Bldg., Birmingham.

*See also Marshall County.

Baker, Roger Denio, mc Harvard 28, NBE 45, Jefferson Hospital, Birmingham.
Barclift, William C., Jr., mc Tenn. 34, recip. Tenn. 37, 1922 S. 10th Ave., Birmingham. (S.)
Barron, James Mathew, mc Tulane 41, sb 42, Employees' Hospital, Fairfield.
Batson, Walter P., mc Tulane 42, sb 43, Employees' Hosp., Fairfield.
Becton, James Alvis, mc Vanderbilt 18, recip. Tenn. 25, Box 2896, Woodlawn, Birmingham.
Beddow, William Henry, mc Tulane 15, sb 15, Med. Arts Bldg., Birmingham.
Benson, Ralph C., mc Johns Hopkins 36, recip. Ind. 41, Medical Arts Building, Birmingham. (S.)
Berrey, Ivan C., mc Rush 25, recip. Ill. 28, 2021 Sixth Avenue North, Birmingham.
Berrey, Ruth R., mc Tulane 28, recip. La. 29, 2021 Sixth Avenue North, Birmingham.
Berry, Robert A., mc S. C. 27, recip. S. C. 32, Woodward Bldg., Birmingham.
Berry, Wm. Thompson, mc Vanderbilt 99, cb 99, Empire Bldg., Birmingham.
Black, John W., mc Ala. 09, sb 10, 528 19th St., Ensley, Birmingham.
Blank, William H., mc Rush 38, sb 38, Woodward Bldg., Birmingham.
Blanton, Russell, mc Rush 31, sb 31, 2121 Highland Ave., Birmingham.
Blue, James Howard, mc Ala. 13, sb 13, Bessemer.
Boggs, Lloyd K., mc Univ. Ga. 24, recip. Ga. 41, 516 N. 21st Street, Birmingham.
Botta, Louis P., mc Rush 26, recip. Ill. 29, 1917½ Ave. E., Ensley, Birmingham.
Boulware, Thos. M., mc Washington Univ. 26, recip. Tenn. 29, 1601 N. 25th St., Birmingham.
Box, Thomas T., mc Chicago M. & S. 16, recip. Miss. 37, Ensley Emergency Hosp., Ensley, Birmingham.
Bradford, Duke C., mc Ala. 14, sb 14, 1509 N. 34th Street, Birmingham. (S.)
Branham, Bolling S., mc Atlanta P. & S. 08, recip. Ga. 19, 916 W. Ninth Ct., Birmingham.
Brannon, Robert M., mc Tulane 22, sb 23, 2121 Highland Ave., Birmingham.
Branscomb, Louise, mc Johns Hopkins 28, Nat. Ex. Bd. 31, Woodward Bldg., Birmingham. (S.)
Bristow, Bernard T., mc Tenn. 24, recip. Tenn. 27, Bessemer.
Brown, Hunter M., mc Tulane 34, recip. La. 38, 1117 S. 22 St., Birmingham. (S.)
Brown, Morgan W., mc Tulane 27, recip. La. 28, 816 S. W. 6th Street, Birmingham.
Brownlee, Leslie G., mc Okla. 12, sb 16, Protective Life Bldg., Birmingham.
Burns, William Arthur, mc Memphis 91, cb Lamar 91, Martin Bldg., Birmingham.
Caldwell, Hale Albert, mc Ala. 18, sb 18, 301 S. 41st St., Birmingham.
Callaway, Raymond R., mc Ill. 27, sb 27, Empire Bldg., Birmingham. (S.)
Carmichael, John Leslie, mc Tulane 24, sb 25, 2011 S. 9th Ave., Birmingham.
Carmichael, Josiah N., mc Ala. 13, sb 13, Fairfield.
Carmichael, William M., mc Univ. Nashville 09, sb 07, Fairfield.
Carpenter, Burwell S., mc Ala. 05, cb Pickens 05, Fairfield.
Carraway, Benjamin M., mc LSU 35, sb 35, 1601 N. 25th St., Birmingham.
Carraway, Chas. Newton, mc Ala. 02, cb 02, 1601 N. 25th St., Birmingham.
Carter, Henry Rose, Jr., mc Pa. 08, sb 20, Woodward Bldg., Birmingham.
Carter, Melson Barfield, mc Tulane 21, sb 21, Woodward Bldg., Birmingham. (S.)
Casey, Albert Eugene, mc St. Louis Univ. 27, recip. Mo. 42, Jefferson Hospital, Birmingham.

- Cermak, Emil C., mc Creighton 33, recip. Neb. 36, Trussville.
- Chandler, James Robert, mc Ala. 09, sb 11, Bessemer.
- Chapman, Jerome Cochran, mc Tulane 23, recip. La. 26, 2160 Highland Avenue, Birmingham.
- Cheatham, Thomas Alfred, mc Jefferson 09, sb 10, Frank Nelson Bldg., Birmingham.
- Cherry, Alfred, mc Univ. Buffalo 36, recip. Ohio 38, Med. Arts Bldg., Birmingham. (S.)
- Chippis, H. Davis, mc Univ. Louisville 34, recip. Ky. 42, Jefferson Hospital, Birmingham. (S.)
- Clayton, Edward C., mc Ala. 09, sb 09, Leeds.
- Clements, F. H., mc Ala. 17, pro forma USN 19, Med. Arts Bldg., Birmingham.
- Cloud, Robert Emmett, mc Tulane 10, sb 09, Ensley, Birmingham.
- Clyde, Wallace A., mc Tulane 26, sb 26, 900 S. 20th St., Birmingham.
- Cochran, John P., mc Ala. 14, sb 18, 1 So. 55th Place, Birmingham.
- Coleman, Grover Cleveland, mc Ala. 11, sb 12, 5049 Parkway, Fairfield.
- Coleman, William E., Jr., mc George Washington 34, sb 35, 2121 Highland Avenue, Birmingham.
- Collier, Sid. W., mc Univ. Minn. 22, recip. Minn. 24, 900 S. 20th St., Birmingham.
- Collins, Chalmers D., mc Louisville 30, sb 30, Massey Bldg., Birmingham. (S.)
- Collins, Thomas A., mc Ala. 12, sb 13, Med. Arts Bldg., Birmingham.
- Colquitt, Chas. J., mc Emory 23, sb 23, Bessemer.
- Comer, Robert T., mc Johns Hopkins 01, cb Bullock 01, Comer Bldg., Birmingham.
- Compton, Wheeler Wilkinson, mc Vanderbilt 03, cb 03, Fairfield.
- Constantine, Kosciusco Walker, mc Johns Hopkins 05, cb 05, 2820 Berwick Rd., Birmingham.
- Conwell, Hugh Earle, mc Ala. 15, sb 15, 216 Med. Arts Building, Birmingham.
- Cooley, Beamon S., mc Tenn. 12, sb 12, Woodward Building, Birmingham.
- Copeland, Miles A., mc Ala. 03, cb 03, Clark Bldg., Birmingham.
- Cornwell, Robert A., mc Jefferson 39, recip. Pa. 41, 1131 N. 28th Street, Birmingham. (S.)
- Coston, Hamilton Ralls, mc Vanderbilt 89, cb 01, 1338 N. 33rd St., Birmingham.
- Coston, Ralls M., mc Okla. 29, recip. Okla. 30, 2012 10th Avenue S., Birmingham. (S.)
- Cothran, Robert M., mc Johns Hopkins 26, recip. Md. 41, 1023 S. 20th St., Birmingham.
- Coyle, Daniel J., mc Rush 28, sb 30, Woodward Bldg., Birmingham.
- Crelly, Harry C., mc Ala. 02, cb Washington 02, Watts Bldg., Birmingham.
- Cunningham, Joseph Anthony, mc Univ. Freiburg 35, NBE 42, Hillman Hospital, Birmingham.
- Cunningham, William Alva, mc Univ. Toronto 23, recip. N. Y. 43, 103 N. 55th St., Birmingham.
- Dabney, Marye Y., mc Johns Hopkins 12, sb 12, Woodward Bldg., Birmingham.
- Daly, Edgar Wm., mc Tulane 08, sb 10, 627 Woodward Bldg., Birmingham.
- Darden, Wm. H., mc Duke 32, recip. Minn. 37, 2640 Pike Avenue, Birmingham. (S.)
- Davenport, L. Orton, mc Western Reserve 09, recip. Col. 26, Birmingham, Rt. 2.
- Davidson, Alton W., mc Emory 29, sb 29, Realty Bldg., Bessemer.
- Davidson, Marion Tabb, mc Univ. Cincinnati 11, sb 12, Medical Arts Bldg., Birmingham. (S.)
- Davis, Julian Walker, mc Tenn. 37, recip. Tenn. 40, 5357 First Avenue N., Birmingham.
- Dean, Leon, mc Ala. 13, sb 14, Ensley, Birmingham.
- Deaver, Clyde Wilson, mc Vanderbilt 17, recip. Tenn. 19, Empire Bldg., Birmingham.
- Deaver, Wilson T., mc Ala. 15, sb 16, Adamsville, Rt. 2.
- Dedman, James E., mc Univ. Tenn. 90, cb 98, Betterton, Md.
- Denison, Geo A., mc Baylor 30, sb 30, Box 2591, Birmingham.
- Denson, Fred Hammond, mc Ala. 12, sb 13, Rt. 4, Box 883, Bessemer.
- Donald, Charles J., mc Tulane 36, sb 36, 918 S. 20th St., Birmingham.
- Donald, Dan Caldwell, mc Tulane 09, sb 11, 918 S. 20th St., Birmingham.
- Donald, Joseph M., mc Tulane 25, recip. Minn. 32, 918 S. 20th St., Birmingham. (S.)
- Donald, Thomas C., mc Ala. 97, cb Butler 97, 918 S. 20th St., Birmingham.
- Donnelly, Charles Augustus, mc Ohio 08, sb 10, Watts Bldg., Birmingham.
- Douglas, Gilbert F., Jr., mc Vanderbilt 40, sb 41, 1111 S. 20th St., Birmingham. (S.)
- Douglas, Gilbert F., mc Ala. 10, sb 11, 1111 S. 20th St., Birmingham.
- Douglass, John, mc Ala. 00, cb Lauderdale 01, Comer Bldg., Birmingham.
- Dowling, Judson Davie, mc Ala. 11, sb 11, 4322 Lyons View Pike, Knoxville, Tenn.
- Drennen, Earle, mc P. & S. N. Y. 06, sb 05, 2160 Highland Ave., Birmingham.
- Durick, Stephen A., mc LSU 33, sb 34, Realty Bldg., Bessemer.
- Durrett, Ebb Brown, mc Ala. 12, sb 12, Bessemer.
- Edwards, Elwart H., mc Univ. Tenn. 39, recip. Tenn. 41, Leeds.
- Edwards, Jesse E. H., mc Univ. Nashville 08, sb 12, McCalla.
- Elgin, C. E., mc Univ. Nashville 05, sb 07, Praco.
- Elkourie, Haickel A., mc Univ. Nashville 01, cb 06, 1625 South 12th Avenue, Birmingham.
- Elkourie, Leo A., mc Rush 29, sb 31, 1625 South 12th Avenue, Birmingham.
- Elliott, Hiram R., Jr., mc Univ. Tenn. 38, recip. Miss. 43, Employees' Hosp., Fairfield.
- Falletta, Pasqualino T., mc Tulane 26, sb 26, Massey Bldg., Birmingham.
- Farmer, H. R., mc Tulane 22, sb 22, Fairfield.
- Farrar, William C., mc Ala. 08, sb 08, Box 2866, Woodlawn Station, Birmingham.
- Ferguson, Burr, mc Columbia 96, sb 13, 4243 Altamont Rd., Birmingham.
- Ferry, James A., mc Tulane 32, sb 32, Medical Arts Bldg., Birmingham.
- Fisher, Gilbert E., mc Univ. Mich. 36, recip. Mich. 40, Medical Arts Building, Birmingham.
- Fonville, Wm. Drakeford, mc Tulane 04, cb Wilcox 05, 929 S. 20th St., Birmingham.
- Ford, C. H., mc Emory 27, sb 27, Med. Arts Bldg., Birmingham.
- Fox, Bertram Arthur, mc Ala. 96, cb 96, Chamber of Commerce Bldg., Birmingham.
- Fox, Carl Alexander, mc Tulane 00, cb 00, Brown-Marx Bldg., Birmingham.
- Gaines, Cecil Dean, mc Ala. 11, sb 11, Woodward Bldg., Birmingham.
- Gaines, H. F., mc Emory 22, sb 23, 5060 Parkway, Fairfield.
- Garber, James R., mc Jefferson 13, sb 13, 1117 S. 22nd St., Birmingham.
- Garlington, William H., mc Louisville 21, recip. Ky. 25, 5353 N. First Ave., Birmingham.
- Garmon, Clyde N., mc Ala. 14, sb 15, Rt. 2, Bessemer.
- Garrison, John Earl, mc Ala. 04, cb Walker 04, Woodward Bldg., Birmingham.
- Gehrken, Henry S., mc Ga. 09, recip. Ga. 29, 1601 N. 25th St., Birmingham.
- Gelperin, Jules, mc Univ. Cincinnati 37, recip. Ohio 39, Woodward Bldg., Birmingham. (S.)

- Gewin, Edwin Evans, mc Tenn. 29, recip. Tenn. 45, Med. Arts Bldg., Birmingham.
- Gillespy, Robert R., mc Tulane 22, sb 22, 4403 Overland Road, Birmingham (S.)
- Gilliland, Martha J., mc Univ. Louisville 41, sb 42, 2930 N. 12th Ave., Birmingham.
- Givhan, Edgar G., Jr., mc Jefferson 28, sb 29, Med. Arts Bldg., Birmingham. (S.)
- Glasgow, Richard D. mc Emory 40, sb 40, Employees' Hospital, Fairfield.
- Glasgow, Robert S., mc Univ. South 00, cb Shelby 00, Adamsville.
- Goldner, Harry, mc Univ. Pa. 37, sb 37, 2121 Highland Avenue, Birmingham.
- Goldstein, Ben, mc Emory 22, sb 22, 2160 Highland Ave., Birmingham.
- Goodall, Albert G., mc Vanderbilt 26, recip. Tenn. 27, Martin Bldg., Birmingham.
- Gordon, George R., mc Jefferson 35, recip. Pa. 40, 2121 Highland Avenue, Birmingham. (S.)
- Graham, George S., Jr., mc Harvard 41, sb 42, 1023 S. 20th St., Birmingham.
- Grasberger, Joseph C., mc Hahnemann 37, recip. Pa. 40, 630 N. 19th St., Bessemer. (S.)
- Green, Albert H., mc Tenn. 28, recip. Tenn. 30, Woodward Bldg., Birmingham. (S.)
- Green, Elbert Paul, mc Ala. 11, sb 12, 1200 Graymont Ave., Birmingham.
- Green, Roy C., mc Tulane 30, sb 30, 5357 1st Avenue North, Birmingham.
- Greene, Gilbert B., mc Tulane 32, sb 34, Woodward Bldg., Birmingham. (S.)
- Griffin, George W., mc LSU 38, recip. La. 39, 2501 N. 16th Ave., Birmingham. (S.)
- Guthrie, Robert F., mc Emory 34, recip. Ga. 37, Woodward Bldg., Birmingham.
- Habeeb, Alfred, mc Univ. Tenn. 38, recip. Miss. 41, Employees' Hospital, Fairfield.
- Hairston, Wm. George, mc Md. 04, sb 04, 1504 N. 33rd Ave., Birmingham.
- Hamrick, Robert A., mc Johns Hopkins 23, recip. Md. 29, 1325 W. 45th Street, Birmingham. (S.)
- Hamrick, Robert Hampton, mc Atlanta 95, cb Blount 96, Watts Bldg., Birmingham.
- Hankins, Gordon M., mc Tulane 36, sb 36, Employees' Hospital, Fairfield. (S.)
- Hardy, Walter B., mc Tulane 12, sb 12, 2121 Highland Ave., Birmingham.
- Hargis, Albert S., Jr., mc Tulane 34, sb 34, 1431 44th Street, W., Birmingham. (S.)
- Hargis, Estes H., mc Pa. 21, recip. Pa. 27, 1131 N. 28th St., Birmingham.
- Harris, Arthur Buckner, mc Univ. Va. 02, cb 03, Med. Arts Bldg., Birmingham.
- Harris, Charlton, mc Ala. 14, sb 14, Indian Rock, Fla.
- Harris, Edward A., mc Wash. Univ. 37, sb 37, Westfield Dispensary, Fairfield.
- Harris, Esau A., mc Univ. South 98, cb St. Clair 98, 221 Realty Building, Bessemer.
- Harris, Farley W., mc Ala. 09, sb 10, Woodward Bldg., Birmingham.
- Harris, Herbert A., mc Ala. 14, sb 14, Woodward Bldg., Birmingham.
- Harris, Seale, mc Univ. Va. 94, sb 94, 2234 Highland Ave., Birmingham.
- Harrison, William Groce, mc Md. 92, cb Talladega 92, 4142 Cliff Road, Birmingham.
- Haun, Chas. A., mc Vanderbilt 23, recip. Tenn. 25, 2715 Ensley Ave., Birmingham.
- Hays, J. Howard, mc Ala. 14, sb 14, Comer Bldg., Birmingham.
- Heacock, Joseph Davis, mc Tulane 92, cb 92, 2021 6th Ave. N., Birmingham.
- Heath, Merritt J., mc Ala. 13, sb 13, Ensley, Birmingham.
- Heflin, Wyatt, mc Jefferson 84, cb Randolph 85, 3216 Cliff Rd., Birmingham.
- Henderson, Hiliary Herbert, Jr., mc Tulane 38, recip. La. 42, Employees' Hospital, Fairfield.
- Hightower, Russell G., mc Rush 36, sb 36, Employees Hospital, Fairfield. (S.)
- Hillhouse, John L., mc Vanderbilt 29, recip. Tenn. 30, Med. Arts Bldg., Birmingham.
- Hirsh, Joseph E., mc Pa. 22, sb 23, Med. Arts Bldg., Birmingham.
- Hogan, Edgar Poe, mc Ala. 09, sb 08, 920 S. 20th St., Birmingham.
- Hogan, George Archibald, mc Ala. 96, cb 96, 920 S. 20th St., Birmingham.
- Hogan, Marshall D., mc Rush 27, sb 27, 311 W. Main St., Boonton, N. J.
- Hogan, Robert Elias, mc Ala. 01, cb Bibb 01, Ensley, Birmingham.
- Horn, Joseph R., Jr., mc Tulane 23, recip. La. 24, Bessemer.
- Horn, Samuel Wilson, mc Emory 16, sb 17, Bessemer.
- Howe, Charles D., mc Univ. Tenn. 40, recip. Tenn. 42, 1601 N. 25th St., Birmingham.
- Hubbard, Lex Walter, mc Jefferson 11, sb 14, Tarrant.
- Hughes, Brady A., mc Jefferson 27, recip. Pa. 36, Woodward Bldg., Birmingham.
- Hunter, William S., mc Univ. Chicago 42, sb 43, Box 188, Rt. 2, Bessemer. (S.)
- Hutto, A. S., mc Ala. 15, sb 15, Pinson.
- Irwin, Winston H., mc Univ. Okla. 37, sb 38, 1601 N. 25th St., Birmingham. (S.)
- Issos, Demetrius N., mc Vanderbilt 27, sb 28, Woodward Bldg., Birmingham.
- Jackson, Harry Lee, mc Ala. 18, sb 18, Empire Bldg., Birmingham.
- Jenkins, John F., mc Ala. 01, cb Mobile 01, 3536 27th Street N., Birmingham.
- Jenkins, John F., Jr., mc Tulane 31, sb 31, 2121 Highland Avenue, Birmingham. (S.)
- Johns, Lemuel J., mc Ala. 14, sb 14, Massey Bldg., Birmingham.
- Johnston, Hardee, mc Univ. Va. 95, cb 96, 2121 Highland Ave., Birmingham.
- Jones, Walter C., mc Northwestern 02, sb 18, 2330 Highland Avenue, Birmingham.
- Jones, W. Nicholson, mc Tulane 27, recip. La. 29, Woodward Bldg., Birmingham.
- Jordan, Jno. Sheffield, mc Emory 25, sb 25, 5357 N. First Ave., Birmingham. (S.)
- Jordan, William Mudd, mc P. & S. N. Y. 95, cb 95, 2772 Hanover Circle, Birmingham.
- Joseph, Kellie N., mc S. C. 29, recip. Ga. 35, Woodward Bldg., Birmingham.
- Justice, John D., mc Emory 33, recip. Ga. 36, 3616 Bessemer Rd., Birmingham.
- Kahn, Sigmond A., mc Tulane 29, recip. La. 31, 2160 Highland Ave., Birmingham. (S.)
- Kelley, Ray Hansen, mc Northwestern 38, recip. Ill. 43, E. I. du Pont de Nemours Co., Pompton Lake, N. J.
- Kennedy, Frank F., mc Tulane 31, recip. La. 35, 2012 S. 10th Avenue, Birmingham. (S.)
- Kennedy, Hughes, Jr., mc Harvard 21, sb 23, Highland Plaza Apts., Birmingham.
- Kesmodel, Karl F., mc Tulane 16, sb 16, Med. Arts Bldg., Birmingham.
- Kimbrough, Ralph M., mc Chicago M. & S. 17, recip. Ill. 23, Powderly.
- Kincannon, Leroy T., mc Va. 20, sb 21, Woodward Bldg., Birmingham. (S.)
- King, Chas. O., mc Vanderbilt 09, sb 09, Med. Arts Bldg., Birmingham.
- Kinkead, Kyle Johnston, mc Tulane 15, sb 17, Empire Bldg., Birmingham.
- Kirby, Lellias E., mc Emory 26, sb 26, 5357 N. First Ave., Birmingham.
- Knight, J. Hurley, mc Emory 31, sb 31, 20 N. 55th Place, Birmingham.
- Kracke, Roy Rachford, mc Rush 27, recip. Ga. 45, Jefferson Hospital, Birmingham.

- Lamar, Clifford L., mc Harvard 20, sb 20, 1922 10th Ave. S., Birmingham.
- Langdon, Harold R., mc Queen's Univ. 38, recip. N. Y. 40, Mulga.
- Ledbetter, Samuel Leonidas, Jr., mc Johns Hopkins 10, sb 10, 939 S. 20th St., Birmingham.
- Leland, Joseph, mc Tulane 04, cb Tuscaloosa 04, 2840 Fairway Drive, Birmingham.
- Lester, Belford S., mc Vanderbilt 07, sb 08, Med. Arts Bldg., Birmingham.
- Lewis, Charles Franklin, mc Tulane 21, sb 22, Woodward Bldg., Birmingham.
- Lewis, Herbert J., mc Ala. 15, sb 16, 1601 Empire Bldg., Birmingham.
- Lewis, Thomas Knight, mc Vanderbilt 12, sb 13, 935 S. 20th St., Birmingham.
- Linder, Browne G., mc Emory 27, sb 27, Med. Arts Building, Birmingham.
- Linder, Hugh M. C., mc Vanderbilt 32, recip. Tenn. 36, 2021 6th Ave. N., Birmingham.
- Lineberry, Ellis D., mc Univ. Va. 26, recip. Va. 31, 1601 N. 25th St., Birmingham.
- Linn, Julius E., mc Emory 28, recip. Ga. 30, Med. Arts Bldg., Birmingham. (S.)
- Lister, Robert H., mc Ala. 16, sb 16, 1528 N. 29th Street, Birmingham.
- Littlejohn, Wilnot Shipp, mc Emory 21, recip. Ga. 30, Med. Arts Bldg., Birmingham. (S.)
- Livingston, James A., mc Pa. 11, sb 19, Woodward Bldg., Birmingham.
- Locke, W. W., mc Tulane 26, sb 26, Empire Bldg., Birmingham. (S.)
- Long, William H., mc Ga. 27, recip. Ga. 31, Empire Bldg., Birmingham. (S.)
- Long, William Walker, mc Tenn. 96, sb 03, Leeds Rd., Birmingham.
- Love, John T., mc Ala. 00, cb Morgan 00, 3619 So. Redmont Rd., Birmingham.
- Lovelady, Robert G., mc Ala. 14, sb 15, 5500 1st Ave. N., Birmingham.
- Lucas, Robert L., mc Vanderbilt 32, recip. Tenn. 34, Birmingham. (S.)
- Lull, Cabot, mc Michigan 99, cb Elmore 01, Med. Arts Bldg., Birmingham.
- Lupton, Frank Allemang, mc Johns Hopkins 99, cb 00, 2105 S. 15th Ave., Birmingham.
- MacQueen, James W., mc Rush 25, recip. Ill. 27, Hillman Hospital, Birmingham.
- Magruder, Thomas V., mc Tulane 10, sb 11, Med. Arts Bldg., Birmingham.
- Martin, Henry Floyd, mc Vanderbilt 22, recip. Tenn. 26, Med. Arts Bldg., Birmingham. (S.)
- Martin, Wade A., mc Ala. 08, sb 10, 516 N. 21st St., Birmingham.
- Martin, Wm. B., mc Ind. 28, recip. Ind. 29, Warrior.
- Martz, Harry, mc N. Y. Univ. 33, recip. N. Y. 39, 2121 Highland Ave., Birmingham. (S.)
- Mason, James Monroe, mc Tulane 99, cb 99, Med. Arts Bldg., Birmingham.
- May, William Lucius, mc Memphis 97, sb 97, Powhatan.
- McCarn, Oscar C., Jr., mc Tulane 40, sb 40, 2501 N. 16th Avenue, Birmingham. (S.)
- McCullough, George C., mc Tulane 34, sb 35, Jacksonville, N. C. (S.)
- McDaniel, Joe Crosby, mc Ala. 12, sb 13, Frank Nelson Bldg., Birmingham.
- McDowell, James F., mc Pa. 34, sb 35, Woodward Bldg., Birmingham. (S.)
- McEniry, Edgar P., mc Emory 18, sb 19, Dolomite.
- McGahey, Robert Goodloe, mc Ala. 12, sb 12, Woodward Bldg., Birmingham.
- McGahey, Travis P., mc Tulane 23, sb 24, Woodward Bldg., Birmingham.
- McGehee, Henry T., mc Ala. 04, sb Tuscaloosa 04, 1549 Graymont Avenue, West, Birmingham.
- McGraw, Felix J., mc S. C. 39, recip. S. C. 40, Birmingham. (S.)
- McKinnon, Hector A., mc Ala. 10, sb 10, 1530 Tuscaloosa Ave., Birmingham.
- McLean, Claude Cooper, mc Vanderbilt 08, sb 08, 2012 10th Ave. So., Birmingham.
- McLester, James Bowron, mc Harvard 30, Nat. Bd. Ex. 33, 930 S. 20th St., Birmingham. (S.)
- McLester, James Somerville, mc Univ. Va. 99, cb 02, 930 S. 20th St., Birmingham.
- McQueen, Joseph Pickens, mc Tulane 11, sb 12, Martin Bldg., Birmingham.
- McQuiddy, Robert Clayton, mc Ala. 12, sb 13, Med. Arts Building, Birmingham.
- Meadows, Burton, mc New York Univ. 43, NBE 45, 708 Tuscaloosa Ave., Birmingham.
- Meadows, James A., mc Ala. 12, sb 12, Med. Arts Bldg., Birmingham.
- Mehaffey, Jonathan W., mc Ala. 13, sb 13, 7932 1st Ave. N., Birmingham.
- Meyer, Benjamin S., mc Univ. Ill. 38, recip. Ill. 42, 1023 S. 20th St., Birmingham.
- Meyer, Jerome, mc Johns Hopkins 14, sb 17, Med. Arts Bldg., Birmingham.
- Miles, Nathan E., mc S. C. 34, recip. S. C. 37, Med. Arts Bldg., Birmingham. (S.)
- Miller, Donald A., mc Western Reserve 37, recip. Ohio 40, 2501 N. 16th Avenue, Birmingham. (S.)
- Miller, James A., mc M. & S. Chicago 13, sb 13, Wylam.
- Mitchell, Henry Eugene, mc Tenn. 93, cb Blount 93, 2306 N. 21st Ave., Birmingham.
- Mitchell, Sidney A., mc Vanderbilt 30, sb 30, Lewisburg Road, Birmingham, Rt. 7.
- Moore, David S., Jr., mc Ala. 08, cb 08, 1127 S. 12th St., Birmingham.
- Moore, Joseph G., mc Ala. 11, sb 12, 1127 So. 12th St., Birmingham.
- Morgan, John Ralph, mc Tulane 17, sb 17, 900 S. 20th St., Birmingham.
- Morland, H. C., mc Ky. 05, cb Hale 05, 2703½ 30th Ave. N., Birmingham.
- Morris, H. R., mc Univ. Nashville 06, cb St. Clair 06, Rt. 1, Box 470, Birmingham.
- Morton, Benjamin F., mc Rush 32, sb 34, Medical Arts Bldg., Birmingham. (S.)
- Motley, Jewett P., mc Rush 36, sb 36, Ensley, Birmingham (S.)
- Motley, Samuel D., mc Ky. 03, cb Tallapoosa 03, 600½ 19th St., Ensley, Birmingham.
- Murphy, Grover E., mc Ala. 11, sb 11, First National Building, Birmingham.
- Nabers, Samuel F., mc Tulane 09, sb 08, 4221 S. 12th Ave., Birmingham.
- Neely, Martin G., mc Univ. Va. 25, sb 25, T. C. I. Hosp., Fairfield.
- Neville, Chas. W., mc Vanderbilt 28, recip. Tenn. 29, Flat Creek.
- Newfield, Semon U., mc Rush 26, recip. Ill. 27, 2012 10th Ave. S., Birmingham.
- Nice, Charles McKinney, mc Pa. 04, cb 05, 1419 Windsor Circle, Birmingham.
- Noland, Lloyd, mc Baltimore 03, pro forma USN 13, Fairfield.
- Norton, Ethelbert Moses, mc Vanderbilt 14, sb 15, 4604, Terrace 2, Central Park, Birmingham.
- O'Connell, Edward, mc Bellevue 07, sb 09, Med. Arts Bldg., Birmingham.
- Odom, H. G., mc Tenn. 22, sb 22, Irondale.
- Orton, Allen E., mc Atlanta 08, sb 08, Muscoda Hospital, Bessemer.
- Parsons, Joe L., mc Emory 26, recip. Ga. 27, 610½ 19th St., Ensley, Birmingham.
- Parsons, William C., mc Emory 24, sb 25, Woodward Bldg., Birmingham. (S.)
- Patton, William B., mc Johns Hopkins 35, recip. Md. 42, 120 Hanover Road, Homewood, Birmingham. (S.)
- Payne, Brack Coleman, mc Ala. 16, sb 16, Lewisburg.
- Payne, Edmund C., mc Univ. Va. 11, sb 11, New Castle.

- Payne, William N., mc Louisville 33, recip. Miss. 37, Bessemer.
- Pennington, Julius A., mc Tulane 39, recip. La. 40, Rt. 2, Box 188, Bessemer.
- Perry, Ezra B., mc Tulane 38, sb 38, 2000 Dartmouth Avenue, Bessemer, (S.)
- Peterson, Edward J., mc Tulane 39, sb 40, 1019 S. 42nd St., Birmingham, (S.)
- Pfeiffer, Ralph B., mc Univ. Nebraska 40, recip. Mo. 42, Jefferson Hospital, Birmingham.
- Pierson, Thomas C., mc Ala. 11, sb 11, Alden.
- Pitts, Edgar B., mc Tulane 35, sb 35, Fairfield, (S.)
- Poole, William L., mc Tulane 38, sb 38, Woodward Bldg., Birmingham.
- Pope, Ernest C., mc Emory 19, recip. Va. 20, 2021 6th Ave. N., Birmingham.
- Posey, Benjamin F., mc Ala. 10, sb 10, Rt. 3, Box 198, Birmingham.
- Posey, Louis C., mc Harvard 35, sb 35, Med. Arts Bldg., Birmingham, (S.)
- Pow, John R., mc Univ. South 03, cb St. Clair 03, Woodward.
- Prescott, Wm. Ernest, mc Ala. 00, cb Chilton 00, 29½ N. 77th St., Birmingham.
- Prescott, Wm. Ernest, Jr., mc Rush 27, sb 27, 29½ N. 77th St., Birmingham.
- Pryor, Robert B., mc Tulane 05, cb Dallas 06, Ensley Hospital Clinic, Ensley, Birmingham.
- Ransom, William Walter, mc Vanderbilt 88, cb 88, Empire Bldg., Birmingham.
- Ray, Emmette C., mc Ala. 18, sb 18, 2012 Avenue F., Ensley, Birmingham.
- Reagan, Cas, mc Tulane 24, recip. Tenn. 25, Veterans' Facility, Montgomery.
- Rike, Heber C., mc Tulane 24, sb 25, 1140 41st St., Belview Hts., Birmingham.
- Roberts, Wyatt S., mc Ala. 14, sb 14, Empire Bldg., Birmingham.
- Robertson, Brison Oakley, mc Vanderbilt 18, sb 19, Empire Bldg., Birmingham.
- Robertson, Jarratt P., mc Vanderbilt 23, recip. Tenn. 24, Med. Arts Bldg., Birmingham.
- Robinson, Edward B., Jr., mc Tulane 36, sb 26, Fairfield, (S.)
- Roscoe, Goeffrey J., mc Univ. Budapest 36, sb 37, 2160 Highland Ave., Birmingham.
- Rosser, Wm. Jas., mc Tulane 25, sb 25, Comer Bldg., Birmingham.
- Rountree, Walter B., mc Vanderbilt 27, recip. Tenn. 30, Thomas Sta., Birmingham.
- Rucker, Edmond W., Jr., mc Univ. Denver 04, sb 08, Woodward Bldg., Birmingham.
- Rudolph, Charles Murray, mc Ala. 00, cb Lowndes 00, 1200 S. 20th St., Birmingham.
- Russell, Richard O., mc Tulane 22, sb 22, 2011 S. 9th Ave., Birmingham.
- Schapiro, Mark M., mc George Washington 38, NBE 41, TCI Emergency Disp., Ensley, Birmingham, (S.)
- Scofield, Theodore F., mc Tulane 26, sb 26, 918 S. 20th St., Birmingham.
- Scott, Edgar Marvin, mc Ala. 01, cb Walker 01, 935 S. 20th St., Birmingham.
- Scott, Edgar M., Jr., mc Harvard 34, recip. Tenn. 37, 935 S. 20th St., Birmingham, (S.)
- Scott, Walter F., mc Univ. Va. 04, cb 07, Med. Arts Bldg., Birmingham.
- Seay, Jas. E., mc Tenn. 27, recip. Tenn. 28, Shades Mountain, Birmingham.
- Seibold, James L., mc Tulane 21, sb 21, 1117 S. 22nd St., Birmingham.
- Sellers, Henry Graham, mc Vanderbilt 00, cb Morgan 00, 1346½ Tuscaloosa Ave., Birmingham.
- Sellers, Ira Jackson, mc Vanderbilt 97, cb 97, Chamber of Commerce Bldg., Birmingham.
- Sellers, William David, mc Atlanta P. & S. 02, sb 02, Martin Bldg., Birmingham.
- Shannon, Paul W., mc Mich. 31, recip. Mich. 36, Woodward Bldg., Birmingham.
- Sherrill, John D., mc Ala. 15, sb 17, Med. Arts Bldg., Birmingham.
- Shropshire, Courtney William, mc Tenn. 00, cb Limestone 03, Frank Nelson Bldg., Birmingham.
- Shugerman, Harry P., mc Johns Hopkins 08, sb 08, 2121 Highland Ave., Birmingham.
- Sibley, Barney Dunbar, mc Ala. 98, cb Walker 99, Empire Bldg., Birmingham.
- Simon, Harold E., mc Univ. Pittsburg 22, recip. Pa. 27, 2930 N. 12th Ave., Birmingham, (S.)
- Simpson, John W., mc Vanderbilt 18, recip. Tenn. 22, 1117 So. 22nd St., Birmingham.
- Sims, Albert G., mc Univ. Nashville 05, cb Talladega 05, Edgewater Mines, Rt. 8, Birmingham.
- Sims, Thos., mc Tulane 23, sb 23, Fairfield.
- Siniard, Emmett Clarence, mc Vanderbilt 17, recip. Ky. 20, Acipco Dispensary, Birmingham.
- Smelo, Leon Samuel, mc Univ. Pa. 34, recip. Pa. 42, 2234 Highland Ave., Birmingham.
- Smith, Charles Henry, mc Ala. 03, sb 03, 3147 Norwood Blvd., Birmingham.
- Smith, D. Driver, mc Tulane 35, recip. La. 38, 1207 S. 21st Place, Birmingham, (S.)
- Smith, Elisha B., mc Ala. 12, sb 14, 1601 N. 25th St., Birmingham.
- Smith, Frank Campbell, mc Ala. 03, cb 03, Bessemer.
- Smith, Greene H., mc Tenn. 16, sb 16, Ramsey Bldg., Ensley, Birmingham.
- Smith, Henry Ralph, mc Tulane 25, sb 25, 2011 S. 9th Ave., Birmingham, (S.)
- Smith, James Clement, mc Ala. 11, sb 11, 201 N. 77th St., Birmingham.
- Smith, Thos. Luther, mc Tulane 23, sb 23, 201 N. 77th St., Birmingham.
- Smith, Virgil D., mc Okla. 34, recip. Okla. 38, Leeds, (S.)
- Snow, James S., mc Univ. Col. 34, sb 35, Woodward Building, Birmingham, (S.)
- Snow, John W., Jr., mc Chattanooga 07, cb Walker 07, Palos.
- Somerset, Sterling M., mc Emory 27, sb 27, 5385 First Avenue North, Birmingham.
- Sorrell, Lewis E., mc Ala. 17, sb 17, 1601 N. 25th St., Birmingham.
- Sparks, David Hoyt, mc Tulane 12, sb 13, 831 3rd Ave. W., Birmingham.
- Spies, Tom D., mc Harvard 28, recip. Ohio 40, Hillman Hospital, Birmingham.
- Spira, Victor, mc Univ. Vienna 37, NBE 44, 2160 Highland Avenue, Birmingham.
- Springer, Homer C., mc Okla. 31, recip. Okla. 32, 630 N. 19th Street, Bessemer.
- Stabler, A. L., mc Vanderbilt 09, sb 08, Martin Bldg., Birmingham.
- Stayer, Glenn, mc Duke 34, NBE 41, Woodward Building, Birmingham.
- Stewart, J. Jones, mc Tulane 36, recip. La. 38, 3422 Norwood Blvd., Birmingham, (S.)
- Stewart, Roddie L., mc Tenn. 34, recip. Tenn. 36, Bessemer, (S.)
- Stewart, Vera B., mc Tenn. 41, recip. Tenn. 44, 2167 Highland Avenue, Birmingham.
- Stockton, Frederick Eugene, mc Tulane 11, sb 19, Comer Bldg., Birmingham.
- Stone, John J., mc Emory 37, recip. Ga. 41, TCI Dispensary, Pratt City.
- Stubbins, Samuel Gaines, mc P. & S. St. Louis 07, cb 07, 2121 Highland Ave., Birmingham.
- Stuteville, Ethel, mc Univ. Ind. 21, recip. Ind. 41, Jefferson Hospital, Birmingham.
- Sweeney, Donald B. P., mc Univ. Iowa 40, recip. Iowa 41, 1131 N. 28th Street, Birmingham, (S.)
- Talley, Dyer Findley, mc Tulane 92, cb 92, 1601 N. 25th St., Birmingham.
- Terhune, S. Ralph, mc Tulane 30, sb 30, 2160 Highland Avenue, Birmingham, (S.)

- Terrill, James W., mc Ala. 13, sb 13, 3120 Avenue H, Ensley, Birmingham.
- Thuss, Chas. J., mc Vanderbilt 31, recip. Tenn. 34, 2230 N. 3rd Avenue, Birmingham.
- Thuss, William G., mc Vanderbilt 20, recip. Tenn. 23, 2230 N. 3rd Avenue, Birmingham.
- Timberlake, Landon, mc Md. 34, recip. Md. 37, 2121 Highland Avenue, Birmingham. (S.)
- Townsend, John M., mc Mich. 30, recip. Mich. 37, U. S. Navy, Birmingham. (S.)
- Trucks, J. Frank, mc Washington Univ. 36, sb 36, 103 N. 55th St., Birmingham. (S.)
- Tucker, Easter W., mc Ala. 13, sb 14, P. O. Box 593, Fairfield.
- Turlington, Lee F., mc Pa. 14, sb 15, 1922 10th Ave. S., Birmingham.
- Tyler, Richard E., mc Emory 28, sb 28, 1601 N. 25th St., Birmingham.
- Underwood, S. Sellers, mc Tulane 17, sb 17, Med. Arts Bldg., Birmingham.
- Vance, James Glenn, mc Ala. 05, cb Tuscaloosa 05, Massey Bldg., Birmingham.
- Wainwright, Samuel P., mc Tulane 22, sb 23, 2121 Highland Avenue, Birmingham. (S.)
- Waldrop, R. W., mc Louisville 96, cb 97, Bessemer.
- Walker, Alfred A., mc Cornell 05, cb 05, Highland Plaza Apts., Birmingham.
- Wallace, Samuel H., mc Ala. 11, sb 11, 9 N. 55th St., Birmingham.
- Ward, Henry Silas, mc Univ. Nashville 98, cb Blount 99, 1601 N. 25th St., Birmingham.
- Ward, Walter Rowland, mc Chattanooga 00, cb Tuscaloosa 00, Martin Bldg., Birmingham.
- Warren, William E., mc Ala. 05, cb DeKalb 05, Mentone.
- Warrick, Geo. W., mc Rush 33, sb 34, Med. Arts Bldg., Birmingham. (S.)
- Warrick, William D., mc Rush 34, sb 35, Med. Arts Bldg., Birmingham. (S.)
- Watkins, Miles A., mc Tulane 09, sb 10, Comer Bldg., Birmingham.
- Watterston, Charles, mc Tulane 09, sb 11, Empire Bldg., Birmingham.
- Weiner, Harry, mc Univ. Minn. 32, recip. Minn. 36, 2121 Highland Avenue, Birmingham. (S.)
- Wiesel, Bertram, mc Pa. 37, sb 37, Med. Arts Bldg., Birmingham.
- Welch, Oliver W., mc Harvard 33, sb 37, Huntsville. (S.)
- Welch, Stewart H., mc Cornell 07, sb 10, 1117 S. 20th St., Birmingham.
- West, Otus T., mc Northwestern 40, sb 40, Employees' Hospital, Fairfield.
- Wiley, Clarence C., mc Baltimore 08, sb 09, Woodward Bldg., Birmingham.
- Wilkinson, David Leonidas, mc Tulane 94, cb Autauga 94, Farley Bldg., Birmingham.
- Wilks, Arthur E., mc Ala. 09, sb 09, 104 Second Ave., Powderly Sta., Birmingham.
- Williams, Howard Bailey, mc Tulane 35, sb 36, Med. Arts Building, Birmingham. (S.)
- Williams, James H., mc Rush 36, sb 36, Employees Hospital, Fairfield.
- Williams, William J., mc Baylor 41, NBE 43, Nigeria, Africa.
- Williamson, Byrn, mc Tenn. 36, recip. Tenn. 38, 2930 N. 12th Avenue, Birmingham.
- Williamson, George William, mc Vanderbilt 00, sb 09, Bessemer.
- Wilson, Charles Henry, mc Tulane 35, sb 35, 6301 Perrier Street, New Orleans. (S.)
- Wilson, Cunningham, mc Pa. 84, cb 84, 2712 Hanover Circle, Birmingham.
- Wilson, Frank C., mc Tulane 20, sb 20, Med. Arts Bldg., Birmingham.
- Wilson, Jos. D., mc Washington Univ. 26, recip. Ohio 31, Med. Arts Bldg., Birmingham. (S.)
- Wilson, Luther Elgin, mc Pa. 11, sb 13, Woodward Bldg., Birmingham.
- Wilson, Ollie E., mc Ala. 10, sb 10, 1621 28th St., Fairview Sta., Birmingham.
- Winn, Lochlin Minor, mc Tulane 00, sb 00, 1015 S. 22nd Street, Birmingham. (S.)
- Wiygul, C. Harrison, mc Emory 37, recip. Ga. 39, Employees' Hospital, Fairfield.
- Woodall, Paul S., mc Pa. 33, recip. Ill. 37, 2121 Highland Avenue, Birmingham. (S.)
- Woods, Arthur W., mc Loyola 38, recip. Ill. 40, Woodward Building, Birmingham. (S.)
- Woodson, Lewis G., Jr., mc Jefferson 20, sb 21, 1124 S. 20th St., Birmingham.
- Woodson, Richard Carlisle, mc Tulane 04, cb Walker 06, Woodward Bldg., Birmingham.
- Word, Samuel Buford, mc LSU 36, recip. Miss. 37, Med. Arts Bldg., Birmingham. (S.)
- Wright, Solon W., mc Ala. 11, sb 11, Realty Bldg., Bessemer.
- Yelton, Chestley Lee, mc Univ. Louisville 37, recip. Ky. 38, 1807 27th Street, Ensley, Birmingham.
- Young, Allen C., mc Queen's Univ. 36, recip. D. C. 41, 630 N. 19th Street, Bessemer.
- Total 420

PHYSICIANS NOT MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

- Ballard, Asa Elwyn, mc Pulte 02, cb 02, Warrior.
- Ballard, Edward H. (col.), mc Howard 26, sb 27, 1420 7th Ave. N., Birmingham.
- Belcher, William Ree, mc Atlanta Southern 89, cb Dale 91, 511 N 21st St., Birmingham.
- Berry, James C., mc S. C. 95, cb 95, Trussville.
- Bradford, Ferd D. (col.), mc Meharry 13, sb 13, 1630 N. 4th Ave., Birmingham.
- Brewer, Henry H. (col.), mc Howard Univ. 35, recip. Kansas 38, 1410 Avenue F, Birmingham.
- Brice, J. Arthur, mc Ala. 13, sb 13, Tarrant.
- Broughton, N. J. (col.), mc Meharry 05, sb 05, 133 So. 61st St., Birmingham.
- Brown, Walter L. (col.), mc Meharry 15, sb 15, 310 S. 23rd St., Birmingham.
- Bryant, Henry Clay (col.), mc Univ. Chicago 11, sb 12, 310 N. 18th St., Birmingham.
- Burwell, Edmund S., mc Harvard 20, recip. Ga. 41, 1220 S. 33rd St., Birmingham.
- Cameron, Robert A., mc Tenn. 35, recip. Miss. 39, TCI Dispensary, Fairfield.
- Clements, Merit DeWitt, mc Tulane 12, sb 12, 1012 S. 26th Street, Birmingham.
- Dale, Henry L. (col.), mc Meharry 43, recip. Tenn. 44, 20 N. 2nd Street, Birmingham.
- Dawkins, James T., mc Ala. 09, sb 09, 1903½ Avenue E, Ensley, Birmingham.
- Demby, Lorenzo S. (col.), mc Meharry 25, sb 26, Bessemer.
- Dozier, Byron, mc Barnes 97, cb Elmore 00, 12 21st Via-duct, Birmingham.
- Drake, Wm. L. (col.), mc Meharry 25, sb 25, 5805 Avenue D., Fairfield.
- Fields, Abijah C., mc Md. 25, sb 26, 1903½ Avenue E, Ensley, Birmingham. (Licensed revoked April 24, 1945.)
- Fields, Elbert T., mc Bellevue 99, cb 99, 1903½ Avenue E, Ensley, Birmingham.
- Giscombe, Cecil Stanley (col.), mc Meharry 16, sb 16, 4238 2nd Ave. N., Avondale.
- Green, Anderson C., mc Ala. 14, sb 14, 2911 N. 16th St., Birmingham.
- Hagler, Prewett L., mc Ala. 91, cb Tuscaloosa 91, 1205 8th Ave. N., Birmingham.
- Hancock, Meda W., mc Univ. South 08, sb 09, Powhatan.
- Hankins, John M., mc Univ. Nashville 07, sb 07, 6609 1st Ave., Birmingham.
- Hanna, Henry P., mc Ala. 12, sb 13, Martin Bldg., Birmingham.
- Harris, Samuel F. (col.), mc Meharry 19, recip. Ky. 26, 400 N. 17th St., Birmingham.
- Hood, Alexander, mc Vanderbilt 00, cb 05, 2006½ 4th Avenue N., Birmingham.

Huey, Ben Maclin, mc Emory 23, sb 24, 714 20th Street, Ensley, Birmingham.
Hutchinson, John E. (col.), mc Meharry 30, recip. Ga. 37, 400 N. 17th St., Birmingham.
Johnson, Roy E., mc Vanderbilt 09, sb 09, 7748 S. 1st Avenue, Birmingham.
Kincaid, John L., mc Ala. 12, sb 12, Bessemer.
Lilly, Robert E., mc Vanderbilt 25, recip. Tenn. 28, Johns. Maclin, Robert B. (col.), mc Meharry 05, cb Tuscaloosa 05, 2815 29th Ave. N., Birmingham.
Matthews, Herbert O. (col.), mc Howard 19, recip. Ind. 37, 103½ N. 21st St., Bessemer.
May, Frank H., mc Univ. South 98, cb Marion 99, 1617 N. 5th Avenue, Birmingham.
McCall, Marion G. (col.), mc Michigan 21, sb 23, 1630 4th Avenue N., Birmingham.
McCarn, Dan Wilson, mc Vanderbilt 34, recip. Tenn. 35, Warrior. (S.)
McCay, Timothy Cleveland, mc Ala. 15, sb 15, Pinson.
McPherson, Charles A. J. (col.), mc Meharry 17, sb 17, 1630 4th Avenue N., Birmingham.
Merritt, Thomas E., mc Jefferson 37, sb 38, Flattop.
Mitchell, Aldus S. (col.), mc Meharry 27, recip. Tenn. 28, 2724½ 29th Ave. N., Birmingham.
Moten, Pierce S. (col.), mc Meharry 06, cb 06, 818 S. 17th Street, Birmingham.
Newman, John Henry, mc Chicago Col. Osteopathy 33, sb 33, Woodward Bldg., Birmingham.
Patterson, Richard R., mc Queens Univ. 36, sb 39, Medical Arts Building, Birmingham.
Paull, Benjamin P., mc Univ. Buffalo 38, recip. N. Y. 40, Employees' Hospital, Fairfield.
Payne, Thomas Henry, mc Ala. 96, cb Shelby 96, 328 N. 17th Street, Birmingham.
Plump, Ad Wimbs (col.), mc Meharry 28, recip. Tenn. 32, 409 N. 10th Ct., Birmingham.
Porter, Daniel W. (col.), mc Meharry 05, cb Walker 06, 4315 N. 9th Ave., Birmingham.
Ragsdale, M. C., mc Univ. Nashville 05, sb 06, Bessemer.
Reynolds, Frederick K., mc Ala. 01, cb 01, 317 2nd Ave., Birmingham.
Robertson, James Kelly (col.), mc Leonard 10, recip. Ga. 23, 1728 20th St., Ensley, Birmingham.
Shepherd, Samuel T., mc Atlanta P. & S. 02, cb Walker 03, 4107 Terrace R., Birmingham.
Simpson, Frank S. (col.), mc Leonard 02, cb Russell 02, 421½ 17th St., Ensley, Birmingham.
Stephens, Joseph H., mc Ala. 15, sb 15, 515 S. 55th Street, Birmingham.
Stoner, William P., mc Univ. Tenn. 37, recip. Tenn. 42, Virginia Mines, Bessemer, Rt.
Swan, Lionel F. (col.), mc Howard 39, recip. N. C. 43, 1410 Sixth Avenue S., Birmingham.
Trammell, Virgil, mc Ala. 12, sb 12, Huffman Rd., Rt. 6, Birmingham.
Ussery, Claudius Jackson, mc Tulane 21, sb 21, 1630 33rd St., Ensley, Birmingham.
Van De Voort, Horace, mc Ala. 10, sb 13, Bessemer.
Watson, William A., mc Memphis Hosp. 11, recip. Miss. 31, Gardendale, Rt. 7, Birmingham.
White, Charles Peyton, mc Memphis 09, sb 13, Labuco.
Whorton, William W., mc Vanderbilt 99, cb Marshall 00, Pratt City.
Woodall, P. H., mc Mich. 96, sb 00, Frank Nelson Bldg., Birmingham.
Young, T. H., mc Tulane 03, cb Lamar 03, 2 N. 60th St., Birmingham.
Total 65

(38) LAMAR COUNTY Birmingham 1877

President—R. H. Redden Sulligent
Vice-President—A. W. Clanton Millport
Secretary-Treasurer—W. L. Box Sulligent, Rt. 2
County Health Officer—W. L. Box (Act.)... Sulligent, Rt. 2

Censors—L. S. Coleman, Chairman, Millport; J. A. Jackson, Sulligent; J. M. Roberts, Vernon; C. A. Davis, Kennedy.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Box, W. L., mc Ala. 06, sb 06, Sulligent, Rt. 2.
Clanton, A. W., mc Miss. 07, cb 07, Millport.
Coleman, Luther S., ng, sb 09, Millport.
Davis, Charles A., mc Ala. 12, sb 12, Kennedy.
Jackson, John A., mc Memphis Hosp. 99, cb 99, Sulligent.
McClure, Herbert A., mc Atlanta 15, sb 15, Mayo, Fla.
Redden, Raymond Hollis, mc Memphis Hosp. 01, cb 01, Sulligent.
Roberts, John Monroe, mc Ala. 07, cb 07, Vernon.
Savage, Victor, mc Vanderbilt 89, cb Fayette 89, Kennedy.
Sizemore, D. M., mc Univ. Nashville 07, cb 07, Sulligent.
Total 10

PHYSICIANS NOT MEMBERS

Black, James Berton, mc Memphis Hosp. 04, cb 04, Vernon.
Collins, Francis A., mc Memphis Hosp. 92, cb 92, Beaver-ton.
Total 2

(39) LAUDERDALE COUNTY Tuscaloosa 1887

President—W. C. Kennedy Florence
Vice-President—J. D. Walden Florence
Secretary-Treasurer—T. D. Cloyd Florence
County Health Officer—C. J. Fisher Florence

Censors—G. A. Cashman, Chairman, Florence; S. S. Roberts, Florence; T. L. Bennett, Jr., Florence; H. M. Simpson, Florence; W. J. Robbins, Florence.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Alexander, William W., mc Vanderbilt 31, recip. Tenn. 34, Florence.
Bayles, Lewis Eugene, mc Ala. 11, sb 11, Anderson.
Bayles, Louie Earl, mc Tulane 35, sb 35, Anderson.
Bennett, Thos. Lee, Jr., mc Tulane 29, sb 29, Florence.
Brown, John Richard, mc Washington Univ. 32, recip. Mo. 35, Florence.
Cashman, George A., mc Columbia P. & S. 19, recip. N. Y. 41, Florence.
Cheney, Henry W., mc Northwestern 92, recip. Ill. 42, Florence.
Cloyd, T. D., mc Grant 08, recip. Tenn. 23, Florence.
Dunn, Milton C., mc Tenn. 41, recip. Tenn. 42, Florence.
Fisher, Charles Jack, mc Tulane 34, sb 34, Florence.
Gray, Edward W., mc Ala. 09, sb 10, Florence.
Jackson, Alva A., mc Northwestern 11, sb 12, Florence.
Jackson, Nial E., mc Long Is. 42, sb 43, Florence.
Kennedy, William C., Jr., mc Columbia Univ. 28, recip. N. Y. 38, Florence.
Maples, John M., mc Louisville 07, cb 07, Killen, RFD.
Moore, Wm. Roscoe, mc Memphis Hosp. 08, sb 07, Florence.
Price, Lance C., mc George Washington Univ. 33, sb 37, Florence. (S.)
Robbins, Wm. Jesse, mc Atlanta P. & S. 12, sb 13, Florence.
Roberts, Shaler S., mc Atlanta 14, sb 14, Florence.
Simpson, Harry Moody, mc Ala. 15, sb 16, Florence.
Stringer, Myron Scott, mc Emory 23, recip. Ga. 28, Florence.
Waddell, John R., mc Vanderbilt 15, sb 15, Rogersville.
Walden, Joe D., mc Rush 37, sb 38, Florence.
Total 23

PHYSICIANS NOT MEMBERS

Belue, John C., ng, cb 90, Rogersville. (Retired.)
Cotton, Spencer F., mc Ala. 09, sb 14, Lexington.

Hicks, Leonard J. (col.), mc Meharry 29, recip. Tenn. 33, Florence.
 Long, Henry (col.), mc Meharry 20, sb 20, Florence.
 Rousseau, Wm. R., mc Ala. 17, sb 17, Rogersville.
 Stutts, Henry Lee, mc Ala. 00, cb 01, St. Joseph, Tenn., Rt. 1.
 Taylor, J. W., mc Tenn. 15, sb 15, Lexington.
 Total 7

(40) LAWRENCE COUNTY

Birmingham 1877

President—S. R. Sanders Moulton
 Vice-President—W. W. Irwin Moulton
 Secretary-Treasurer—L. R. Murphree Moulton
 County Health Officer—L. R. Murphree* Moulton

Censors—J. A. Ussery, Chairman, Courtland; R. P. Irwin, Moulton; J. P. Dyar, Moulton; W. R. Taylor, Town Creek; S. R. Sanders, Moulton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Dyar, James P., mc Tulane 23, recip. Tenn. 24, Moulton.
 Farish, Clarence G., mc Tulane 33, sb 33, Moulton. (S.)
 Irwin, Robert P., mc Ala. 10, sb 09, Moulton.
 Irwin, Willard W., mc Emory 36, sb 36, Moulton.
 Sanders, Samuel R., mc Ala. 08, sb 08, Moulton.
 Taylor, Woodie R., mc Univ. Nashville 10, sb 10, Town Creek.
 Ussery, James A., mc Ala. 15, sb 15, Courtland.
 Total 7

PHYSICIANS NOT MEMBERS

McCrary, Dowell W., mc Memphis Hosp. 13, recip. Tenn. 19, Town Creek.
 Total 1

(41) LEE COUNTY

Huntsville 1880

President—M. W. Samford Opelika
 Vice-President—F. H. Boyd Opelika
 Secretary-Treasurer—A. H. Graham Opelika
 County Health Officer—A. H. Graham Opelika

Censors—A. D. McLain, Chairman, Salem; F. H. Boyd, Opelika; C. S. Yarbrough, Auburn; J. G. Palmer, Opelika; B. S. Bruce, Opelika.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Askew, William, mc Wash. Univ. 37, recip. Mo. 39, Auburn. (S.)
 Blackshear, Gill Wyeth, mc Tulane 23, recip. La. 26, Opelika.
 Boyd, Frank H., mc Emory 30, sb 30, Opelika.
 Bruce, Byron S., mc Univ. Texas 11, recip. Texas 20, Opelika.
 Burkhead, DeWitt, mc Tulane 20, recip. La. 24, Opelika.
 Coggin, Fount Randall, mc Ala. 11, sb 11, Waverly.
 Dennis, Jephtha Weldon, mc Emory 27, sb 27, Auburn.
 Dupree, John Wesley, Jr., mc Emory 36, recip. Ga. 38, Opelika, Rt. 2.
 Floyd, Henry T., mc Johns Hopkins 23, recip. Ind. 41, Auburn.
 Graham, Arthur H., mc Toronto 22, sb 26, Opelika.
 Hudson, Percy Dannelly, mc Emory 30, recip. Ga. 31, Opelika. (S.)
 Jones, John Allen, Jr., mc Emory 38, sb 38, Opelika. (S.)
 McLain, Andrew D., mc Ala. 01, cb Chambers 01, Salem.
 Owsley, Winfield S., mc Emory 24, sb 25, Opelika.
 Palmer, Julian G., mc Tulane 23, sb 23, Opelika.
 Rothermel, Robert Earl, mc Temple Univ. 35, recip. Pa. 38, 519 Dexter Avenue, Montgomery. (S.)

*See also Morgan County.

Samford, Millard W., mc Emory 34, recip. Ga. 36, Opelika.
 Thomas, Benjamin F., mc Emory 17, sb 17, Auburn. (S.)
 Walton, Mary, mc Univ. Minn. 30, NBE 41, Opelika. (S.)
 Warren, Thurston A., mc Baylor 29, recip. La. 32, Auburn.
 Yarbrough, Cecil S., mc Tenn. 01, cb Russell 01, Auburn.
 Total 21

PHYSICIANS NOT MEMBERS

Darden, John W. (col.), mc Leonard 01, sb 02, Opelika.
 Lindsey, Eugene A. (col.), mc Meharry 08, sb 09, Opelika.
 Total 2

(42) LIMESTONE COUNTY

Birmingham 1877

President—J. H. Maples Athens
 Vice-President—J. W. Maddox Ardmore
 Secretary-Treasurer—A. J. DuPuy Athens
 County Health Officer—J. H. Maples (Act.) Athens

Censors—H. A. Darby, Chairman, Athens; J. O. Belue, Athens; D. E. Jackson, Lester; A. J. DuPuy, Athens; C. V. Mayhall, Athens.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Belue, Julius O., mc Vanderbilt 15, sb 15, Athens.
 Crutcher, John Sims, Jr., mc Vanderbilt 29, recip. Tenn. 34, Athens. (S.)
 Darby, Henry Alonzo, mc Ala. 01, cb 01, Athens.
 DuPuy, Alton J., mc Baylor 27, recip. Texas 41, Athens.
 Jackson, David E., mc Tenn. 38, recip. Tenn. 40, Lester.
 Maddox, John Willard, mc Tenn. 21, recip. Tenn. 30, Ardmore.
 Maples, Joseph Hemans, mc Univ. Nashville 05, cb 05, Athens.
 Maples, William Ellis, mc Univ. Nashville 03, cb 03, Athens.
 Mayhall, Clifford Vernon, mc Ala. 15, sb 15, Athens.
 Pettus, J. J., mc Ala. 08, sb 08, Belle Mina.
 Powers, Alvin Dow, mc Ala. 11, sb 11, Athens.
 Shelamer, Arthur McKee, mc S. C. 28, recip. S. C. 35, Athens. (S.)
 Teasley, Gerald H., mc Emory 30, recip. Ga. 34, Athens. (S.)
 Total 13

PHYSICIANS NOT MEMBERS

Peyton, Wade H. (col.), mc Meharry 22, recip. Tenn. 29, Athens.
 Total 1

(43) LOWNDES COUNTY

Mobile 1878

President—W. E. Lee Ft. Deposit
 Secretary-Treasurer—E. F. Leatherwood Hayneville
 County Health Officer—E. F. Leatherwood Hayneville

Censors—N. G. James, Chairman, Hayneville; W. E. Lee, Ft. Deposit; E. F. Leatherwood, Hayneville; W. L. Stagers, Benton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

James, Norman Gilchrist, mc Ala. 98, cb 98, Hayneville.
 Leatherwood, Elbert F., mc Ala. 07, cb 07, Hayneville.
 Lee, William Ernest, mc Atlanta P. & S. 06, cb 06, Ft. Deposit.
 Stagers, William L., mc Ala. 16, sb 20, Benton.
 Total 4

PHYSICIANS NOT MEMBERS

Coleman, Henry Neal, ng, sb 01, Ft. Deposit.
 Total 1

(44) MACON COUNTY

Selma 1879

President—H. H. Winters Tuskegee
Secretary-Treasurer—Murray Smith Tuskegee
County Health Officer—Murray Smith Tuskegee

Censors—P. M. Lightfoot, Chairman, Shorter; T. F. Taylor, Tuskegee; H. H. Winters, Tuskegee; B. W. Booth, Shorter; W. A. Edwards, Notasulga.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Booth, Benson W., mc Ala. 05, cb Autauga 05, Shorter.
Edwards, Winston A., mc Tenn. 36, sb 37, Notasulga. (S.)
Lightfoot, Philip Malcolm, mc Ala. 00, cb 00, Shorter.
Smith, Murray, mc Emory 29, sb 29, Tuskegee.
Taylor, Thomas F., mc Ala. 04, cb Mobile 04, Tuskegee.
Winters, Harry Hall, mc Tulane 24, recip. La. 26, Tuskegee.

Yancey, Gautier C., mc Ala. 19, sb 19, Tuskegee.
Total 7

PHYSICIANS NOT MEMBERS

Chenault, John W. (col.), mc Univ. Minn. 30, recip. Ill. 36, Tuskegee Institute.
Dibble, Eugene Heriot (col.), mc Howard 19, recip. D. C. 21, Veterans Hosp., Tuskegee.
Dwiggins, Horace Greeley (col.), mc Meharry 34, NBE 43, Veterans' Hosp., Tuskegee.
Thompson, Charleton, mc P. & S. Atlanta 99, cb 99, Tuskegee.
Walwyn, Cyril A. (col.), mc Howard 28, recip. D. C. 37, Tuskegee Institute.
Wilkerson, Leonard Boyce, mc Ky. 02, recip. Ky. 21, Shorter.
Williams, Joshua W. (col.), mc Howard Univ. 32, recip. Ga. 36, Veterans Hospital, Tuskegee.

Total 7

(45) MADISON COUNTY

Birmingham 1877

President—G. W. Adams Huntsville
Vice-President—T. E. Dilworth Huntsville
Secretary-Treasurer— Huntsville
County Health Officer—M. M. Duncan (Act.) Huntsville

Censors—M. R. Moorman, Chairman, Huntsville; O. J. Brooks, Huntsville; C. A. Grote, Huntsville; J. B. Laughlin, Huntsville; W. F. Jordan, Huntsville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Adams, George W., mc Washington Univ. 40, recip. Mo. 42, Huntsville.
Brooks, Osceola Judkins, mc Tulane 93, cb Elmore 93, Huntsville.
Caldwell, Edwin Valdivia, mc Ala. 07, sb 06, Huntsville.
Carpenter, James Allen, mc Ala. 96, cb 96, New Hope.
Carpenter, James L., mc Vanderbilt 35, sb 35, New Hope.
Dickey, Edwin W., mc Chattanooga 97, cb Morgan 03, Hazel Green.
Dilworth, Thos. E., Jr., mc Vanderbilt 25, recip. Tenn. 26, Huntsville.
Duncan, Maurice Miller, mc Ala. 14, sb 14, Huntsville.
Grayson, Ambrose T., mc Chattanooga 06, sb 06, New Market.

Grote, Carl A., mc Ala. 12, sb 12, Huntsville.
Hatchett, Wm. C., mc Memphis Hosp. 12, sb 12, Hollywood, Fla.
Holliman, James D., mc Tenn. 24, sb 25, Huntsville.
Jordan, William F., mc Jefferson 09, sb 09, Huntsville.
Kyser, James Allen, mc Tulane 11, sb 11, Madison.
Lary, John H., mc Tulane 35, sb 35, Huntsville. (S.)
Laughlin, J. B., mc Va. 12, pro forma USN 20, Huntsville.
McCown, William G., mc Vanderbilt 28, recip. Tenn. 29, Huntsville. (S.)

McKissack, Wm. Milton, mc Univ. Chicago 27, sb 27, Huntsville.

Moorman, John D., mc Harvard 36, sb 40, Huntsville. (S.)
Moorman, Marion Ridley, mc Univ. South 00, cb 01, Huntsville.

Parker, Harry J., mc Loyola Univ. 37, recip. Ill. 41, 10251 S. Oakley Ave., Chicago. (S.)

Russell, Christopher H., mc Ala. 12, sb 13, Huntsville.

Sentell, James H., mc Tenn. 04, cb Jackson 06, New Hope.
Summers, William Pleasant, mc Univ. Nashville 05, recip. Tenn. 19, Toney.

Walker, H. O., mc Vanderbilt 21, sb 21, Huntsville.

Walker, Moody, mc Vanderbilt 26, recip. Tenn. 34, Huntsville.

Whitaker, James E., mc Tulane 22, sb 23, Huntsville.

Wikle, Jesse Ollie, mc Ala. 15, sb 15, Madison.

Williamson, Edwin Oliver, mc Chattanooga 98, cb 98, Guiley.

Total 29

PHYSICIANS NOT MEMBERS

Beard, Robert S. (col.), mc Meharry 22, recip. Tenn. 24, Huntsville.

Cherry, Stark O. (col.), mc Temple 10, recip. Pa. 40, Oakwood Junior College, Huntsville.

Gumbs, Oliver S. (col.), mc Meharry 41, recip. Tenn. 42, Huntsville.

Total 3

(46) MARENGO COUNTY

Birmingham 1877

President—A. H. Bobo Demopolis
Vice-President—C. E. Rhodes Jefferson
Secretary-Treasurer—C. J. Stallworth Thomaston
County Health Officer—C. E. Kimbrough (Act.) Linden

Censors—C. J. Stallworth, Chairman, Thomaston; T. H. Gaillard, Magnolia; C. E. Kimbrough, Linden; A. H. Bobo, Demopolis; T. C. Cameron, Faunsdale.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Allen, Walter Earl, mc Tenn. 16, sb 16, Sweet Water.
Bobo, Arlington H., mc Ala. 11, sb 11, Demopolis.
Cameron, Turner C., mc Ala. 07, sb 07, Faunsdale.
Cocke, William T., mc Ala. 03, cb Hale 03, Demopolis.
Dunning, Guy Jennings, mc Ala. 11, sb 11, Linden.
Gaillard, Thos. Hamilton, mc Ala. 06, cb Mobile 06, Magnolia.
Hand, Leslie M., mc Ky. 04, cb 04, Demopolis.
Kimbrough, Cecil Emmett, mc Tulane 26, sb 26, Linden.
Rhodes, Chas. E., mc Univ. South 05, cb 06, Jefferson.
Stallworth, Clarke Jackson, mc Md. 12, sb 12, Thomaston.
Williams, Gerald N., mc Tulane 32, Nat. Ex. Bd. 33, Linden.

Total 11

PHYSICIANS NOT MEMBERS

Lee, Earl F., mc Ala. 03, cb 04, Rt. 1, Box 41, Gastonburg.
Nutter, Robert A., mc Va. 40, recip. Va. 42, Demopolis.

Total 2

(47) MARION COUNTY

Montgomery 1888

President—J. O. Brooks Hamilton
Vice-President—J. L. Wilson Hackleburg
Secretary—M. S. White Hamilton
Treasurer—J. R. Burleson Hamilton
County Health Officer—H. C. McRee Hamilton

Censors—R. L. Hill, Chairman, Winfield; J. R. Burleson, Hamilton; R. B. Garlington, Brilliant; M. S. White, Hamilton; M. C. Hollis, Winfield.

NAMES OF MEMBERS WITH THEIR COLLEGES AND
POSTOFFICES

Bonds, William Riley, mc Ala. 92, cb Winston 92, Winfield.
Brooks, James Otis, mc Tenn. 35, recip. Tenn. 39, Hamilton.
Brown, James Rias, mc Memphis Hosp. 12, sb 13, Hamilton.
Burlenson, John Rufus, mc Memphis Hosp. 97, cb 97, Hamilton.
Busby, S. S., mc Ala. 08, sb 08, Hamilton.
Garlington, Robert Bernard, mc Emory 21, sb 21, Brilliant.
Hill, Robert L., mc Memphis Hosp. 05, cb 05, Winfield.
Hollis, Murray C., mc Memphis Hosp. 08, sb 08, Winfield.
Johnson, John Carroll, mc Louisville 92, cb Fayette 92, Hamilton.
McRee, Hugh Clark, mc Univ. Nashville 98, sb 02, Hamilton.
White, Marvin S., mc Louisville 03, cb 03, Hamilton.
Wilson, John L., mc Ala. 11, sb 12, Hackleburg.
Total 12

PHYSICIANS NOT MEMBERS

Barnes, Reuben H., mc Atlanta 14, sb 14, Winfield. (Retired.)
Cochran, William W., mc Chattanooga 05, cb 05, Brilliant.
Total 2

(48) MARSHALL COUNTY

Anniston 1886

President—H. L. Rogers Albertville
Vice-President—M. T. Hunt Boaz
Secretary-Treasurer—Lee Weathington Guntersville
County Health Officer—Lee Weathington Guntersville

Censors—B. C. Scarbrough, Chairman, Albertville; A. G. Finlay, Guntersville; A. L. Isbell, Albertville; J. M. Crawford, Arab; H. E. Barker, Boaz.

NAMES OF MEMBERS WITH THEIR COLLEGES AND
POSTOFFICES

Barker, Hampton E., mc Emory 32, recip. Ga. 34, Boaz.
Barnard, Radford M., mc Tenn. 26, sb 27, Arab.
Couch, Ezekiel H., mc Vanderbilt 05, cb 05, Guntersville.
Crawford, Jas. M., mc Tenn. 29, sb 30, Arab.
Finlay, Andrew G., mc Univ. Col. 29, recip. Col. 33, Guntersville.
Horsley, Henry L., mc Univ. Nashville 04, cb 04, Boaz.
Huckaby, W. R., mc Ala. 15, sb 15, Guntersville.
Hunt, Marston T., mc Tenn. 34, sb 34, Boaz.
Hyatt, Ernest M., mc Ala. 11, sb 11, Albertville.
Isbell, A. L., mc Ala. 12, sb 12, Albertville.
Lavender, Belton N., mc Tenn. 38, recip. Tenn. 39, Albertville.
Martin, Thos. E., mc Vanderbilt 25, recip. Tenn. 27, Guntersville.
Rogers, Harold Lawton, mc Rush 35, sb 35, Albertville.
Scarbrough, B. C., mc Tenn. 11, sb 11, Albertville.
Venning, Edward W., mc Univ. Va. 38, recip. Va. 39, Guntersville.
Weathington, Lee, mc Ala. 13, sb 13, Guntersville.
Total 16

PHYSICIANS NOT MEMBERS

Fennell, Robt. F., mc Tulane 11, sb 11, Guntersville. (Retired.)
Jordan, D. C., mc Memphis Hosp. 92, cb 92, Guntersville. (Retired.)
Noel, William East, mc Grant 99, cb 00, Boaz. (Retired.)
Total 3

(49) MOBILE COUNTY

Mobile 1876

President—C. H. Ross Mobile
Vice-President—J. D. Peake Mobile
Secretary—W. W. Scales Mobile

Treasurer—F. T. Boudreau Mobile
County Health Officer—O. L. Chason Mobile

Censors—L. W. Hollis, Chairman, Mobile; E. W. Cawthon, Plateau; J. M. Weldon, Mobile; G. O. Segrest, Mobile; A. M. Cowden, Crichton.

NAMES OF MEMBERS WITH THEIR COLLEGES AND
POSTOFFICES

Acker, Paul Jerome Moeris, mc Ala. 92, cb 92, 153 Government St., Mobile.
Adams, M. Vaun, mc Penn. 28, sb 28, 803 Government St., Mobile.
Armistead, John Robert, mc Md. 08, sb 08, Prichard.
Baumhauer, Jacques H., mc Tulane 26, sb 27, 653 Government St., Mobile.
Beck, Julius Edward, mc Ala. 12, sb 12, 103 Dauphin St., Mobile.
Bell, John Mac, mc Ala. 15, sb 15, 208 Government St., Mobile.
Blake, Theodore M., mc Ala. 00, cb 03, Toulminville.
Blewett, Means, mc Tenn. 91, cb Washington 95, Citronelle.
Bondurant, Eugene DuBose, mc Univ. Va. 83, cb Hale 83, 1109 Government St., Mobile.
Boudreau, Floyd T., Jr., mc Tulane 30, recip. La. 33, 103 Dauphin Street, Mobile.
Brown, Alexander John, mc St. Louis Univ. 35, recip. Mo. 36, 56 St. Joseph St., Mobile. (S.)
Cawthon, Edly W., mc Ala. 08, sb 08, Plateau.
Chason, Otis L., mc Tulane 25, sb 25, 119 Conti St., Mobile.
Clarke, Norborne R., Jr., mc Penn. 26, sb 28, 1201 Springhill Avenue, Mobile. (S.)
Cleveland, Claude Mastin, mc Tulane 21, sb 25, 103 Dauphin St., Mobile.
Cogburn, Harry Reginald, mc Ala. 13, sb 13, 56 St. Joseph St., Mobile.
Cowden, Arthur M., mc Ala. 16, sb 16, Crichton.
Davis, Charles S., mc Univ. Ind. 27, sb 27, 1155 Springhill Avenue, Mobile.
Dix, Albert Sidney, mc Rush 36, sb 37, 4 N. Jackson St., Mobile.
Dodson, James Horace, mc Ala. 14, sb 14, 103 Dauphin St., Mobile.
Dowling, Herbert Bascom, Jr., mc Ala. 20, sb 20, 803 Government St., Mobile.
England, Francis Tillman, mc Tenn. 34, recip. Tenn. 36, 50 S. Franklin St., Mobile. (S.)
England, John Tillman, mc Ala. 99, cb 99, 50 S. Franklin St., Mobile.
Fonde, George Heustis, mc Ala. 97, cb 97, 113 St. Francis St., Mobile.
Fonde, William Gorgas, mc Tulane 40, recip. La. 41, Chickasaw. (S.)
Forcheimer, Herbert H., mc Pa. 09, sb 09, 103 Dauphin St., Mobile.
Frazer, Emmett B., mc Ala. 18, sb 18, 109 N. Conception St., Mobile. (S.)
Gaillard, Samuel S., mc Ala. 10, sb 10, 103 Dauphin St., Mobile. (S.)
Gaines, Marion Toulmin, mc Ala. 90, cb 92, 56 St. Joseph St., Mobile.
Gay, Nathaniel S., mc Ala. 00, cb 01, Whistler.
Goldsmith, Edward F., mc Tulane 34, sb 34, Prichard. (S.)
Graham, Joseph B., mc Univ. Va. 28, recip. Va. 32, 56 St. Joseph St., Mobile.
Gray, Henry W., mc Ky. 03, sb 13, Crichton.
Greene, John H., mc Univ. Va. 29, recip. Va. 42, Whistler.
Haas, Toxey Daniel, mc Ala. 12, sb 12, 103 Dauphin St., Mobile.
Hannon, William Campbell, mc Ala. 16, sb 16, 1257 Springhill Ave., Mobile.
Heiter, Wm. Leslie, mc Tulane 28, sb 28, 103 Dauphin St., Mobile.
Henderson, Andrew D., mc Vanderbilt 29, recip. Tenn. 30, 259 St. Francis St., Mobile. (S.)

Hill, Vivian H., mc Emory 26, recip. Ga. 28, 55 S. Joachim St., Mobile. (S.)
Hinton, Lawrence H., mc Emory 28, recip. Miss. 29, 103 Dauphin Street, Mobile.
Hollis, Lotta Winston, mc Ala. 20, sb 20, 56 St. Joseph St., Mobile.
Hope, John C., mc Ala. 08, sb 09, 200 Dauphin St., Mobile.
Howard, Percy John, mc Ala. 96, cb 96, 103 Dauphin St., Mobile.
Inge, Francis Marion, mc Md. 10, sb 10, 14 St. Joseph St., Mobile.
Inge, James Tunstall, mc Univ. New York 94, cb 95, 55 S. Joachim St., Mobile.
Ingram, Geo. H., mc Tulane 21, sb 21, Veterans Admin., Tuscaloosa. (S.)
Johnson, Gayle T., mc Univ. Ark. 30, recip. La. 34, 56 St. Joseph St., Mobile. (S.)
Jones, William C., mc Ala. 07, sb 07, 103 Dauphin St., Mobile.
Kilpatrick, George Carlton, mc Tulane 08, sb 15, 103 Dauphin St., Mobile.
Lester, Richard P., mc Emory 25, sb 25, 103 Dauphin St., Mobile.
Little, Joe H., mc Emory 28, sb 28, 14 St. Joseph St., Mobile. (S.)
McCafferty, E. L., mc Atlanta P. & S. 02, cb 02, Mount Vernon.
McCall, Daniel T., mc Louisville 94, cb Choctaw 94, 1901 Government St., Mobile.
McVay, Leon Victor, mc Ala. 15, sb 15, 200 Dauphin St., Mobile.
Meeker, Wm. Raymond, mc Rush 19, Nat. Ex. Bd. 26, 109 N. Conception St., Mobile. (S.)
Minor, Walter H., mc Emory 29, sb 29, 56 St. Joseph St., Mobile. (S.)
Mohr, Charles A., mc Ala. 84, cb 92, 254 St. Anthony St., Mobile.
Moody, Irving W., mc Univ. Texas 37, recip. Texas 41, 56 St. Joseph Street, Mobile. (S.)
Moorer, Monte LeRoy, mc Ala. 17, sb 17, Mt. Vernon.
Mulherin, Hugh G., mc Univ. Ga. 29, recip. Ga. 30, 1260 Springhill Ave., Mobile.
Murphy, Samuel S., Jr., mc Tulane 38, recip. La. 40, 56 St. Joseph St., Mobile.
Muscat, Jos. O., mc St. Louis Univ. 31, sb 31, 58 N. Conception St., Mobile.
Newburn, George W., mc Ala. 07, cb 07, Prichard.
O'Gwynn, John C., Jr., mc Tenn. 29, recip. Tenn. 30, 18 1/2 S. Conception St., Mobile. (S.)
Oswalt, George Guy, mc Ala. 14, sb 14, 56 St. Joseph St., Mobile.
Partridge, Clarence V., mc Tulane 30, sb 31, 1201 Springhill Avenue, Mobile. (S.)
Peake, John Day, mc Univ. Va. 30, recip. Va. 32, 1208 Springhill Ave., Mobile.
Perdue, James Devote, mc Ala. 13, sb 13, 56 St. Joseph St., Mobile.
Perry, Alton R., mc Baylor 30, recip. Texas 40, 56 St. Joseph St., Mobile. (S.)
Peterson, James Jesse, mc Tulane 01, cb Lee 01, 103 Dauphin St., Mobile.
Reaves, Jesse Ullman, mc Tulane 08, sb 08, 103 Dauphin St., Mobile.
Roach, Alexander N. T., mc Univ. South 02, cb Perry 02, 911 Government St., Mobile.
Roberts, Mack Jerome, mc Tulane 30, recip. La. 32, 103 Dauphin St., Mobile. (S.)
Roe, Lee Wright, mc Ala. 01, cb 01, 103 Dauphin St., Mobile.
Ross, Cecil H., mc Tenn. 16, sb 16, 359 St. Francis St., Mobile.
Rouse, Clyde C., mc Tulane 27, recip. La. 28, 56 St. Joseph St., Mobile. (S.)
Rowe, Harry S., mc Emory 22, sb 22, Mt. Vernon.
Rowe, Jos. Flournoy, mc Ala. 14, sb 14, 107 S. Joachim Street, Mobile.

Rumpanos, Socrates N., mc Duke 37, Nat. Ex. Bd. 39, 109 N. Conception St., Mobile (S.)
Rutherford, Chas. L., mc Emory 27, sb 27, 309 Government St., Mobile.
Sanders, J. Gillis, mc Tulane 13, sb 13, 56 St. Joseph St., Mobile.
Savage, Charles H., mc Tulane 17, pro forma USN 19, Prichard.
Scales, Willis West, mc Ala. 96, cb 96, 119 Conti St., Mobile.
Segrest, Grady Oscar, mc Emory 24, sb 24, 653 Government St., Mobile.
Sellers, David F., mc Tulane 29, recip. La. 40, 103 Dauphin St., Mobile.
Sellers, William L., Jr., mc Wash. Univ. 36, recip. Mo. 39, 56 St. Joseph St., Mobile.
Sledge, Edward Simmons, mc Pa. 09, sb 10, 1201 Springhill Avenue, Mobile.
Spitzberg, Randolph H., mc Univ. Ark. 36, recip. Ark. 38, Mobile. (S.)
Stephens, Selden H., mc Emory 23, sb 23, 14 St. Joseph St., Mobile.
Stephens, Warren C., mc Tulane 35, sb 35, 14 St. Joseph St., Mobile. (S.)
Sumner, Isaac C., mc Univ. Ark. 28, sb 28, 55 S. Joachim Street, Mobile.
Taylor, Earle Ernest, mc Tenn. 04, cb Baldwin 04, Crichton.
Taylor, James Leslie, mc Tulane 20, sb 21, 56 St. Joseph St., Mobile. (S.)
Taylor, Richard V., Jr., mc Univ. Va. 10, sb 12, 1201 Springhill Avenue, Mobile.
Terrill, Edward Chapin, mc Ala. 09, sb 10, 4 N. Jackson St., Mobile.
Thompson, Wm. A., mc Univ. Tenn. 04, cb Baldwin 04, Citronelle.
Tisdale, William C., mc Tulane 18, sb 18, Mt. Vernon.
Walker, Howard S. J., mc Memphis Hosp. 13, sb 14, 103 Dauphin St., Mobile.
Webb, Virginia E., mc LSU 33, recip. La. 42, 1201 Springhill Ave., Mobile.
Weldon, Joseph Marion, mc Ala. 13, sb 13, 309 N. Government St., Mobile.
Wilson, John M., mc Ala. 07, sb 07, 103 Dauphin St., Mobile.
Wise, I. Milton, mc Indiana 24, recip. Ohio 26, 56 St. Joseph St., Mobile.
Wood, Arthur A., mc Tulane 31, sb 31, 103 Dauphin St., Mobile. (S.)
Wright, Ruffin A., mc Univ. Va. 89, cb Sumter 89, 6 S. Ann St., Mobile.
Zieman, Alphonse Hays, mc Tulane 35, sb 35, 103 Dauphin St., Mobile. (S.)
Total 105

PHYSICIANS NOT MEMBERS

Adams, John Thomas, mc Ala. 09, sb 09, 169 Dauphin St., Mobile.
Amendola, Arthur A., mc St. Louis Univ. 37, recip. Tenn. 44, 56 St. Joseph St., Mobile.
Brown, Leland Leslie, mc Tenn. 42, recip. Tenn. 43, 113 St. Francis St., Mobile.
Doehring, Erich T., mc Greifswald 21, sb 21, 56 St. Joseph St., Mobile.
Farrior, Lawrence B., mc Ala. 16, sb 16, Merchants Nat. Bk. Bldg., Mobile.
Flipppo, La Faun N., mc Ala. 04, cb Franklin 07, 306 Dauphin Street, Mobile.
Franklin, James Alexander (col.), mc Michigan 14, sb 15, 570 Davis Avenue, Mobile.
Gessler, Ivan W., mc Tulane 38, recip. Tenn. 42, Chickasaw. (S.)
Goode, E. B. (col.), mc Meharry 28, recip. Tenn. 29, 1066 Davis Ave., Mobile.
Henderson, Thos. Bain, Jr., mc S. C. 43, recip. S. C. 44, 259 St. Francis St., Mobile.

Innis, Samuel B. (col.), mc Meharry 05, sb 05, 1062 Davis Ave., Mobile.
 Kirklin, Marion A., mc Ala 13, sb 13, Spring Hill.
 Lane, Leonard T., mc Ala. 12, sb 12, Prichard.
 Lange, Charles E. F., mc Univ. Texas 42, recip. Texas 43, Chickasaw.
 Marshall, Wallace S., mc Northwestern 32, recip. Wis. 43, 103 Dauphin St., Mobile.
 McClure, Herbert Cecil, mc Med. Evan. 40, NBE 42, 109 N. Conception, Mobile.
 Miller, Irvin S., mc Columbia Univ. 26, recip. Va. 44, 56 St. Joseph St., Mobile.
 Mitchell, George J., mc Tulane 39, recip. Miss. 44, 309 Government St., Mobile.
 Moore, John Calvin, mc Ala. 08, sb 08, 22 S. Royal St., Mobile.
 Muscat, Vincent Paul, mc St. Louis Univ. 43, recip. Mo. 45, City Hospital, Mobile.
 Oden, Georgia E. (col.), mc Howard 32, NBE 33, 1258 Congress St., Mobile.
 Park, Milton O., mc Vanderbilt 28, recip. Tenn. 37, Crichton.
 Peters, Robert H., mc Ala. 94, cb 95, Mobile.
 Reneke, Edward J., mc Tenn. 29, recip. Tenn. 32, 951 Marine St., Mobile.
 Sherman, Charles R., mc Tulane 42, sb 43, Chickasaw.
 Spottswood, Dillon J., mc Ala. 90, cb 92, 54 N. Washington Ave., Mobile.
 Stevens, Thomas A. (col.), mc Howard 25, recip. Pa. 40, 1258 Congress St., Mobile.
 Tapia, Mose Hudson, mc Ala. 20, sb 20, Bayou La Batre.
 Taylor, John Francis (col.), mc Meharry 16, sb 16, 505 St. Michael St., Mobile.
 Webster, Harry N., Jr., mc Jefferson 41, sb 41, 113 St. Francis St., Mobile.
 White, Meredith, mc Am. Sc. Osteopathy 10, sb 10, 14 St. Joseph St., Mobile.
 Wilkerson, G. H. (col.), mc Meharry 97, cb 97, 608 Congress St., Mobile.
 Williams, Guy H., mc Okla. 34, recip. Okla. 42, Merchants Nat. Bk. Bldg., Mobile.
 Total 33

(50) MONROE COUNTY

Birmingham 1877

President—W. A. Stallworth..... Frisco City
 Vice-President—J. J. Dailey..... Tunnel Springs
 Secretary-Treasurer—W. W. Eddins..... Monroeville
 County Health Officer—W. W. Eddins (Act). Monroeville

Censors—W. A. Stallworth, Chairman, Frisco City; R. A. Smith, Monroeville; E. R. Cannon, Vredenbergh; T. E. Dennis, Monroeville; W. W. Eddins, Monroeville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Broughton, William Edward, mc Louisville 10, sb 10, Perdue Hill.
 Cannon, Edmund R., mc Ala. 05, cb Wilcox 05, Vredenbergh.
 Cobb, Wm. Floyd, mc Vanderbilt 95, cb 98, Frisco City.
 Dailey, John Jonathan, mc Ala. 06, cb 06, Tunnel Springs.
 Dennis, Thomas Edmund, mc Univ. South 08, sb 08, Monroeville.
 Eddins, Woodrow W., mc Rush 37, sb 37, Monroeville.
 Smith, Rayford A., mc Ala. 12, sb 13, Monroeville.
 Stallworth, William A., mc Emory 24, sb 24, Frisco City.
 Total 8

PHYSICIANS NOT MEMBERS

Stacey, Andrew G., mc Ky. 05, cb 06, Evergreen, Rt. 1.
 Total 1

(51) MONTGOMERY COUNTY

Eufaula 1878

President—W. A. Daniel, Jr..... Montgomery
 Secretary—J. Sam Smith..... Montgomery
 Treasurer—F. C. Stevenson..... Montgomery
 County Health Officer—J. L. Bowman..... Montgomery

Censors—D. G. Gill, Chairman, Montgomery; C. G. Laslie, Montgomery; F. C. Stevenson, Montgomery; D. S. Hagood, Montgomery; F. W. Riggs, Montgomery.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Anderson, Benjamin F., mc Ala. 08, sb 09, Sellers.
 Austin, Burton F., mc Ala. 17, sb 17, 519 Dexter Ave., Montgomery.
 Barnes, J. Mac Ilwaine, mc Emory 28, sb 28, Montgomery. (S.)
 Bartlett, Haywood S., mc Emory 29, sb 29, 36 Clayton St., Montgomery. (S.)
 Bazar, Philip S., mc McGill 36, sb 39, 201 Montgomery St., Montgomery. (S.)
 Benkwith, Karl B., mc Univ. Rochester 34, recip. Minn. 40, 36 Clayton St., Montgomery. (S.)
 Bickerstaff, James Warren, mc Emory 27, sb 28, First National Bank Bldg., Montgomery.
 Bird, Buford Cosby, mc Emory 12, recip. Ga. 19, 221 S. Court St., Montgomery.
 Blue, John Howard, mc P. & S. N. Y. 01, sb 01, 201 Montgomery St., Montgomery.
 Bograd, Nathan, mc St. Andrews (Scot.) 35, sb 36, 36 Clayton St., Montgomery. (S.)
 Boozer, Thomas S., mc Washington Univ. 37, sb 37, 32 Clayton St., Montgomery.
 Bowman, James Luther, mc Univ. Va. 97, cb Bullock 01, City Hall, Montgomery.
 Branch, Jno. L., mc Harvard 26, Nat. Ex. Bd. 29, 310 Montgomery St., Montgomery. (S.)
 Britton, William R., mc Emory 29, recip. Ga. 35, 4 Catoma St., Montgomery. (S.)
 Broach, Norman Leslie, mc Emory 09, sb 03, Pine Level.
 Buchanan, John P., mc Ala. 92, cb Butler 92, 3 S. Court St., Montgomery.
 Buresch-Henke, Hildegard, mc Univ. Breslau 34, sb 37, 462 S. Court St., Montgomery.
 Burke, Rush Pearson, mc P. & S. N. Y. 08, sb 10, 201 Montgomery St., Montgomery.
 Burwell, Philip K., mc Tulane 40, recip. La. 41, Moore Bldg., Montgomery.
 Cannon, Douglas Launeese, mc Jefferson 19, sb 20, 519 Dexter Ave., Montgomery.
 Chapman, Frank E., mc LSU 37, recip. La. 44, 708 Cloverdale Road, Montgomery.
 Clapp, Henry W., mc Univ. Mich. 33, recip. Mich. 41, 519 Dexter Avenue, Montgomery. (S.)
 Climo, Henry J., mc Ohio State 37, recip. Ohio 39, 119 Adams Ave., Montgomery. (S.)
 Cobbs, Beverly Woodfin, mc Tulane 19, sb 19, 28 Sayre St., Montgomery.
 Cohen, Nace R., mc Emory 37, recip. Ga. 40, Gunter Building, Montgomery. (S.)
 Collins, Henry C., mc Emory 34, recip. Ga. 37, 201 Montgomery St., Montgomery. (S.)
 Cowles, A. D., mc Ala. 11, sb 11, Ramer.
 Daniel, William A., Jr., mc Northwestern 39, NBE 41, 115 S. Union St., Montgomery.
 Davis, John Walter, Jr., mc Univ. Va. 32, recip. Va. 37, 201 Montgomery St., Montgomery. (S.)
 Dawson, Harris Pickens, mc Tulane 10, sb 09, 17 Adams Ave., Montgomery.
 Dillon, John F., 3rd., mc Washington Univ. 36, recip. Mo. 39, 201 Montgomery St., Montgomery.
 Dodge, Eva, mc Univ. Md. 25, NBE 38, 501 Madison Avenue, New York.
 Farrior, James Harvey, mc Rush 30, recip. Ind. 34, Montgomery. (S.)

- Gill, Daniel Gordon, mc Univ. Toronto 22, sb 26, 519 Dexter Ave., Montgomery. (S.)
- Glazer, Harry, mc Tulane 31, recip. La. 34, Montgomery. (S.)
- Gunter, Wm. A. 3rd., mc Johns Hopkins 26, recip. N. J. 30, 203 S. Court St., Montgomery. (S.)
- Hagood, Daniel Salley, mc Tulane 25, recip. La. 26, First Nat. Bk. Bldg., Montgomery.
- Haigler, James Robert, mc Ala. 97, sb 97, 315 Narrow Lane Rd., Montgomery.
- Harris, Homer Persius, mc Tulane 21, sb 21, Moore Bldg., Montgomery.
- Hicks, James B., mc Johns Hopkins 24, recip. Md. 41, 201 Montgomery St., Montgomery.
- Hill, James Fitts, mc P. & S. N. Y. 11, recip. Wash. 23, 305 Church St., Montgomery.
- Hill, Luther Leonidas, mc Univ. N. Y. 81, cb Jefferson 81, 21 S. Perry St., Montgomery.
- Hill, Luther L., Jr., mc Tulane 29, recip. La. 30, 24 S. Perry St., Montgomery. (S.)
- Hill, Robert Somerville, mc Univ. N. Y. 91, cb 91, 310 Montgomery St., Montgomery.
- Holding, Bruce Fowler, mc Va. 17, pro forma USN 21, 201 Montgomery St., Montgomery.
- Hough, James Spencer, mc Georgetown 93, recip. D. C. 23, 519 Dexter Ave., Montgomery.
- Houston, Hubert S., mc Univ. Ill. 27, recip. Ill. 44, Oak Park, Ill.
- Hubbard, Thomas Brannon, mc P. & S. N. Y. 10, sb 12, 515 Forest Ave., Montgomery.
- Jackson, Benjamin Franklin, mc Vanderbilt 08, sb 07, 201 Montgomery St., Montgomery.
- Jackson, B. Franklin, Jr., mc New York Univ. 36, recip. N. Y. 39, 201 Montgomery St., Montgomery. (S.)
- Johnson, Claud, mc Vanderbilt 32, recip. Tenn. 38, 201 Montgomery St., Montgomery.
- Johnson, Harald N., mc Univ. Neb. 33, NBE 42, 519 Dexter Avenue, Montgomery.
- Kaiser, Elias Noah, mc Long Island 32, recip. N. Y. 40, 123 Adams Avenue, Montgomery. (S.)
- Kirkpatrick, Milton Barnes, mc Tulane 96, cb Crenshaw 96, 201 Montgomery St., Montgomery.
- Lafferty, Charles R., mc LSU 34, recip. La. 40, St. Margaret's Hosp., Montgomery.
- Laslie, Carney G., mc Baltimore 03, cb Macon 03, 203 Catoma St., Montgomery.
- Leach, Charles Nelson, mc Leland Stanford 14, recip. Cal. 25, 49 West 49th St., New York.
- Long, Daniel J., mc Ala. 16, sb 17, 515 Forest Ave., Montgomery.
- Marks, Robt. H., mc Albany 31, recip. N. Y. 41, U. S. P. H. S., Bethesda, Md. (S.)
- Marrs, Theodore Clarke, mc Univ. Tenn. 40, recip. Tenn. 44, 17 Adams Avenue, Montgomery.
- Martin, Farris J., mc Tulane 29, recip. Miss. 31, Montgomery. (S.)
- Martin, John A., mc Vanderbilt 24, sb 24, 201 Montgomery St., Montgomery. (S.)
- McConnico, Frank Hawthorne, mc Tulane 99, cb Wilcox 99, 201 Montgomery St., Montgomery.
- McGehee, William Wallace, mc Ala. 07, sb 08, 201 Montgomery St., Montgomery.
- Meadows, Henry Howard, Jr., mc Washington Univ. 36, recip. Mo. 38, 201 Montgomery St., Montgomery. (S.)
- Mertins, Paul S., Jr., mc Columbia Univ. P. & S. 33, Nat. Ex. Bd. 35, Bartlett Bldg., Montgomery. (S.)
- Milligan, Rufus Lee, mc Univ. Nashville 03, cb Cullman 03, 201 Montgomery St., Montgomery.
- Monsky, David B., mc Tulane 33, sb 33, Montgomery. (S.)
- Montgomery, Arthur Hugh, mc Atlanta 98, cb 98, 201 Montgomery St., Montgomery.
- Mount, Bernard, mc Tulane 00, sb 06, 201 Montgomery St., Montgomery.
- Newdorp, John, mc Rush 36, recip. Ill. 41, 312 W. Shawnee Dr., Montgomery.
- Nodine, Edwin R., mc Tulane 25, recip. N. Y. 37, 201 Montgomery St., Montgomery.
- Parker, Chas. E. R., mc Vanderbilt 27, recip. Tenn. 29, 204 College Street, Montgomery. (S.)
- Penton, John Randolph, mc Emory 14, sb 15, 201 Montgomery St., Montgomery.
- Pollard, Charles Teed, mc Tulane 97, cb 97, 201 Montgomery St., Montgomery.
- Reynolds, Fred Dawson, mc Johns Hopkins 16, recip. Pa. 19, 203 Catoma St., Montgomery.
- Riggs, Frank Willard, mc Univ. Va. 25, sb 25, 401 S. Court St., Montgomery.
- Rosen, Herman L., mc Vanderbilt 34, recip. Tenn. 36, 310 Montgomery St., Montgomery. (S.)
- Sellers, Wilbur Allen, mc Ala. 04, cb Bullock 04, 201 Montgomery St., Montgomery.
- Shelton, Samuel Wayne, mc Univ. Ark. 28, recip. Ark. 29, Kilby, Montgomery.
- Smith, J. Sam, mc Univ. Louisville 36, recip. Ky. 40, 4 Catoma St., Montgomery.
- Smith, Walton H. Y., mc McGill 23, recip. Iowa 34, 519 Dexter Ave., Montgomery.
- Stevenson, Forney Caldwell, mc P. & S. N. Y. 93, cb Calhoun 93, 531 S. Perry St., Montgomery.
- Stickley, Courtney S., mc Va. 33, recip. Va. 35, 201 Montgomery St., Montgomery.
- Stokes, Alice Hill, mc N. Y. University 40, sb 40, 305 Church St., Montgomery.
- Stough, William Vesta, mc Ala. 07, cb 07, 201 Montgomery St., Montgomery.
- Suggs, Samuel D., mc Ala. 05, cb 05, 310 Montgomery St., Montgomery.
- Tankersley, William, mc Ky. 06, cb Crenshaw 06, Hope Hull.
- Thigpen, Charles Alston, mc Tulane 88, cb Butler 88, 401 S. Court St., Montgomery.
- Thigpen, Francis M., mc Tulane 34, recip. Minn. 40, 401 S. Court St., Montgomery. (S.)
- Thomas, Archie E., mc Vanderbilt 24, sb 24, 17 Adams Ave., Montgomery.
- Thorington, Thomas Chilton, mc Tulane 94, cb 94, 10½ Court Square, Montgomery.
- Trumper, Abraham, mc Jefferson 11, sb 12, 201 Montgomery St., Montgomery.
- Van Wezel, Norman, mc Western Reserve 35, recip. Ohio 39, 17 Adams Avenue, Montgomery.
- Watkins, J. Harold, mc Tulane 27, sb 27, 401 S. Court St., Montgomery. (S.)
- Weil, Clarence K., mc Columbia Univ. 23, sb 27, 119 Adams Ave., Montgomery. (S.)
- Westcott, William B., mc P. & S. N. Y. 02, sb 02, 203 Catoma St., Montgomery.
- Wilkerson, Fred Wooten, mc P. & S. N. Y. 09, sb 09, 201 Montgomery St., Montgomery.
- Wilkerson, William Washington, mc Tulane 19, sb 19, 201 Montgomery St., Montgomery.
- Wilkinson, Henry B., mc Univ. Va. 94, cb Tuscaloosa 96, 201 Montgomery St., Montgomery.
- Willis, Chas. Alfred, mc Tulane 40, recip. La. 42, 119 Adams Ave., Montgomery.
- Wilson, Robert Kemp, mc Univ. Ga. 28, NBE 37, 515 Forest Ave., Montgomery.
- Total 102

PHYSICIANS NOT MEMBERS

- Adair, R. T. (col.), mc Amer. Missionary 10, sb 11, 208½ Monroe St., Montgomery.
- Black, J. Henry, mc Ala. 05, sb 05, 12½ Dexter Ave., Montgomery.
- Boyd, Lynn Matthews, mc Ala. 01, cb Macon 01, Waugh.
- Long, Thos. F., mc Tulane 08, recip. La. 23, Veterans' Facility, Montgomery.
- McLean, Jas. Neal, mc Tulane 98, cb Lowndes 99, Snowdoun.
- Pettus, William Dean (col.), mc Meharry 34, recip. Tenn. 35, 292½ W. Jeff Davis Ave., Montgomery.
- Rankin, Howard Payne, mc Tulane 10, sb 10, Veterans' Facility, Montgomery.

Ross, Freeland Floyd (col.), mc Howard 27, sb 27, 36½ N. Lawrence St., Montgomery.
 Smothers, Chas. Washington (col.), mc Meharry 32, recip. Tenn. 33, 123½ Monroe St., Montgomery.
 Stokes, Ewel M., mc Atlanta P. & S. 14, sb 14, 12 Court Sq., Montgomery.
 Washington, William (col.), mc Meharry 06, cb Lowndes 06, 283 S. Jackson St., Montgomery.
 Wilborn, Don (col.), mc Leonard 09, sb 10, 123½ Monroe St., Montgomery.
 Wynn, Andrew Lee, mc Md. 89, cb Covington 03, Mt. Meigs Rd., Montgomery.
 Total 13

HONORARY MEMBER

Damon, S. R., Ph. D., 519 Dexter Avenue, Montgomery.

(52) MORGAN COUNTY

Mobile 1876

President—E. M. Chenault.....Decatur
 Vice-President—J. W. Hughes.....Decatur
 Secretary-Treasurer—L. R. Murphree.....Decatur
 County Health Officer—L. R. Murphree.....Decatur
 Censors—J. C. Bragg, Chairman, Decatur; E. L. Chenault, Decatur; A. J. Dinsmore, Decatur; E. R. Emens, Decatur; W. H. Lovelady, Hartselle.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Anderson, Walton H., mc Vanderbilt 18, recip. Tenn. 19, Decatur.
 Block, William Henry, mc Tenn. 36, recip. Tenn. 37, Hartselle. (S.)
 Bragg, Jno. C., mc Ala. 17, sb 17, Decatur.
 Brindley, Thaddeus B., mc Georgia Eclectic 91, cb 00, Hartselle.
 Burch, John T., mc Ala. 06, cb Lawrence 06, Hartselle.
 Chenault, Erskine M., mc Vanderbilt 25, recip. Tenn. 26, Decatur.
 Chenault, Frank L., mc Ala. 04, cb Lawrence 04, Decatur.
 Chenault, John Murphy, mc Vanderbilt 42, NBE 44, Decatur. (S.)
 Cleere, Ruel C., mc Ala. 09, sb 09, Danville.
 Dinsmore, A. J., mc Chicago P. & S. 16, recip. Ill. 20, Decatur.
 Emens, Edward Redding, mc Vanderbilt 27, recip. Tenn. 28, Decatur.
 Greer, Hugh Dixon, mc Ala. 10, sb 10, Decatur.
 Guyton, Thomas M., mc Vanderbilt 35, recip. Tenn. 38, Decatur.
 Hamil, James Young, mc Ala. 16, sb 16, Decatur.
 Hamm, Pat, mc Univ. Ark. 41, recip. Ark. 45, Hartselle.
 Howle, Jas. Augustus, mc Ala. 90, cb Elmore 90, Hartselle.
 Hughes, J. W., mc Loyola 16, sb 17, Decatur.
 Lovelady, William H., mc Ala. 97, cb 97, Hartselle.
 Murphree, Lee Roy, mc Vanderbilt 23, sb 23, Decatur.
 Nungester, Garrold H., mc Tulane 33, sb 33, Decatur. (S.)
 Pitt, Charles K., mc Tulane 39, recip. La. 41, Decatur.
 Ramey, Daniel R., Jr., mc Tenn. 36, recip. Tenn. 37 Hartselle. (S.)
 Roan, Avery M., mc Chicago M. & S. 14, sb 14, Decatur.
 White, Arthur Marion, mc Ala. 09, sb 10, Hartselle.
 Total 24

PHYSICIANS NOT MEMBERS

Baugh, Wendell Phillip, mc Louisville 11, recip. Tenn. 23, Decatur.
 Booth, William M., mc Vanderbilt 02, cb Jackson 02, Hartselle.
 Cashin, Newlyn E. (col.), mc Howard 08, sb 08, Decatur.
 Grosfeld, William J., mc Long Is. 21, sb N. Y. 36, Decatur.
 Sherard, Winston H. (col.), mc Meharry 08, recip. Ga. 25, Decatur.
 Vinson, Noley H., mc Tulane 35, sb 36, Falkville.
 Wiley, James B., mc Tenn. 32, recip. Tenn. 34, Decatur.
 Total 7

(53) PERRY COUNTY

Montgomery 1875

President—J. R. Dawson.....Uniontown
 Vice-President—T. J. Jones.....Marion
 Secretary-Treasurer—J. R. Long.....Marion
 County Health Officer—J. R. Long.....Marion

Censors—S. A. Gordon, Chairman, Marion; M. H. Eskew, Uniontown; J. V. Howell, Marion; C. B. Robinson, Marion; T. J. Jones, Marion,

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Dawson, James R., mc Vanderbilt 03, cb Jefferson 03, Uniontown.
 Eskew, M. H., mc Univ. Va. 17, sb 17, Uniontown.
 Gordon, Samuel A., mc Ala. 95, cb Lowndes 95, Marion.
 Howell, John V., mc Tulane 21, sb 21, Marion.
 Jones, Thomas J., mc Ala. 15, sb 18, Marion.
 Long, John Reed, mc Tenn. 25, sb 25, Marion.
 Robinson, Cornelius B., mc Louisville 92, cb Lowndes 92, Marion.
 Wilkerson, Arthur F., mc Univ. Pa. 34, sb 36, Marion. (S.)
 Total 8

PHYSICIANS NOT MEMBERS

None.

(54) PICKENS COUNTY

Eufaula 1878

President—H. W. Hill.....Carrollton
 Vice-President—L. C. Davis.....Gordo
 Secretary-Treasurer—V. L. Ashcraft.....Reform
 County Health Officer—J. H. Ashcraft*.....Carrollton

Censors—H. W. Hill, Chairman, Carrollton; V. L. Ashcraft, Reform; A. T. Kirk, Gordo, Rt. 2; C. M. Murphy, Aliceville; L. C. Davis, Gordo.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Ashcraft, Virgil Lee, mc Ala. 12, sb 12, Reform.
 Davis, John Lewis, mc Vanderbilt 91, cb Tuscaloosa 91, Gordo.
 Davis, Lewis Clifton, mc Emory 15, sb 15, Gordo.
 Duncan, Wm. W., mc Ala. 00, cb Fayette 00, Aliceville.
 Hill, Hugh Wilson, mc Ala. 04, cb 04, Carrollton.
 Kirk, Albert Thomas, mc Memphis Hosp. 02, cb 02, Gordo, Rt. 2.
 McLellan, Thomas Roy, mc Memphis Hosp. 03, cb 03, Aliceville.
 Murphy, C. M., mc Ala. 98, cb Greene 98, Aliceville.
 Parker, Sheffie Rufus, mc Ala. 09, sb 09, Aliceville.
 Spruill, George Edward, mc Memphis Hosp. 01, cb 02, Ethelsville.
 Wimberly, Gilbert B., mc Ala. 92, cb Lamar 92, Reform.
 Total 11

PHYSICIANS NOT MEMBERS

Snoddy, Ephriam Alex, mc Ala. 97, cb Lamar 97, Aliceville.
 Total 1

(55) PIKE COUNTY

Eufaula 1878

President—W. P. Stewart.....Troy
 Vice-President—J. O. Colley, Jr.....Troy
 Secretary—H. M. Sacks.....Troy
 Treasurer—T. D. Cowles.....Troy
 County Health Officer—W. H. Abernethy.....Troy

*See also Fayette County.

Censors—T. D. Cowles, Chairman, Troy; W. P. Stewart, Troy; W. B. Sanders, Troy; R. B. Beard, Troy; H. M. Sacks, Troy.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Abernethy, Wm. Henry, mc Ala. 09, sb 09, Troy.
Beard, Robert Briggs, mc Tulane 13, sb 13, Troy.
Beck, Chester Keith, mc Tenn. 34, recip. Tenn. 36, Troy.
(S.)
Colley, James O., Jr., mc Tulane 34, recip. La. 35, Troy.
Cowles, Thomas DeWitt, mc Ala. 18, sb 18, Troy.
Edge, Oscar Nelson, mc P. & S. Atlanta 10, sb 10, Troy.
Grant, Charles Augustus, mc Tenn. 08, sb 12, Goshen.
Johnston, Francis Thomas, mc Ala. 20, sb 20, Brundidge.
Johnston, John David, mc P. & S. Atlanta 00, sb 01, Brundidge.
Killingsworth, Noah W., mc Tulane 25, sb 25, Brundidge.
Reynolds, Grover C., mc Tulane 11, sb 11, Brundidge.
Sacks, Herman M., mc Louisville 35, recip. Ky. 37, Troy.
Sanders, William Bryan, mc Atlanta Sou. 85, cb 85, Troy.
Stallings, Homer Sylvanus, mc P. & S. Atlanta 02, cb 02, Troy.
Stewart, William P., mc Tulane 32, recip. La. 35, Troy.
Total 15

PHYSICIANS NOT MEMBERS

Davidson, James W., mc Chattanooga 06, recip. Tenn. 24, Troy.
Total 1

(56) RANDOLPH COUNTY

Eufaula 1878

President—C. E. Ford Roanoke
Vice-President—J. T. Clack Wadley
Secretary-Treasurer—W. W. Stevenson Roanoke
County Health Officer—M. L. Shaddix* Wedowee

Censors—C. E. Ford, Chairman, Roanoke; O. C. Mastin, Wedowee; J. R. Manley, Roanoke; R. C. Lovvorn, Newell; J. T. Clack, Wadley.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Bonner, Gerson W., mc Emory 31, sb 31, Roanoke.
Bonner, William Wallace, mc Atlanta Sou. 92, sb 92, Rock Mills.
Clack, J. Thos., mc Ala. 11, sb 11, Wadley.
Ford, Charles Edward, mc Atlanta 14, sb 14, Roanoke.
Gay, Andrew Jackson, mc Chicago M. & S. 13, sb 14, Roanoke.
Lovvorn, Robert C., mc Atlanta 12, sb 12, Newell.
Manley, John Radney, mc Memphis Hosp. 13, sb 20, Roanoke.
Mastin, Orville Charles, mc Detroit 86, sb 08, Wedowee.
Stevenson, William Worth, mc Ala. 03, cb 03, Roanoke.
Ussery, Gordon Clopton, mc Emory 19, recip. Ga. 22, Roanoke.
Total 10

PHYSICIANS NOT MEMBERS

Denny, Thomas H., mc Atlanta 15, sb 15, Wadley. (License revoked March 6, 1945.)
Swann, Joseph Charles, mc Ala. 90, cb 92, Wedowee.
Total 2

(57) RUSSELL COUNTY

Tuscaloosa 1887

President—Clarence Long Hurtsboro
Vice-President—R. C. Prather Phoenix City
Secretary-Treasurer—R. B. McCann Seale
County Health Officer—R. W. Todd Phoenix City

*See also Clay County.

Censors—Clarence Long, Chairman, Hurtsboro; R. B. McCann, Seale; R. C. Prather, Phoenix City; S. J. Floyd, Phoenix City.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Floyd, Seth J., mc Tulane 25, recip. La. 26, Phoenix City.
Long, Clarence, mc Chattanooga 01, cb Barbour 02, Hurtsboro.
McCann, Richard Bennett, mc Atlanta 11, sb 11, Seale.
Prather, Robert Clark, mc Ala. 98, cb 98, Phoenix City.
Total 4

PHYSICIANS NOT MEMBERS

Allen, Arthur Redding, mc Atlanta 97, cb 98, Fort Mitchell, RFD.
Brooks, Roland L., mc Atlanta 16, recip. Ga. 30, Phoenix City, Rt. 2.
Floyd, Ashby, mc Tulane 89, cb Lee 95, Phoenix City.
Kebe, George B. (col.), mc Meharry 38, recip. Tenn. 41, Phoenix City.
Todd, Robert W., mc Atlanta P. & S. 12, sb Ga. 12, Phoenix City.
Total 5

(58) SHELBY COUNTY

Birmingham 1877

President—Terrell Bridges Montevallo
Vice-President—E. H. Sanders Columbiana
Secretary-Treasurer—Willena Peck Montevallo
County Health Officer—E. F. Sloan Columbiana

Censors—J. H. Crawford, Chairman, Columbiana; J. I. Reid, Montevallo; E. F. Sloan, Columbiana; C. T. Acker, Montevallo; J. A. Hines, Siluria.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Acker, Charles Thomas, mc Ala. 00, cb 00, Montevallo.
Bridges, Terrell, mc Ala. 15, sb 23, Montevallo.
Crawford, James H., mc Tulane 22, sb 22, Columbiana.
Curtis, Robert C., mc Memphis Hosp. 01, cb 01, Calera.
Embry, Jerre Carl, mc Atlanta 89, cb St. Clair 89, Vincent.
Evans, Kenneth, mc Rush 29, sb 30, Boothton.
Eversole, William C., mc Univ. Va. 34, recip. Va. 36, Vincent.
Gould, Kenneth N., mc Louisville 31, recip. Ky. 36, Wilsonville.
Hines, John Allen, mc Tulane 21, sb 21, Siluria.
Hubbard, Leslie H., mc Washington Univ. 37, sb 37, Wilton. (S.)
Parnell, Leighton C., mc Tenn. 28, recip. Tenn. 29, Montevallo.
Peck, Willena, mc Woman's of Baltimore 00, sb 15, Montevallo.
Reid, John Inzer, mc Univ. Nashville 06, cb Blount 06, Montevallo.
Ryan, J. M., mc Ala. 15, sb 17, Helena.
Sanders, Elbert H., mc Tulane 41, sb 42, Columbiana.
Sloan, Elihu Frank, mc Emory 16, sb 16, Columbiana.
Smith, Thomas O., ng, cb Bibb 07, Wilsonville.
Total 17

PHYSICIANS NOT MEMBERS

None.

(59) ST. CLAIR COUNTY

Eufaula 1878

President—T. L. Rennie Pell City
Vice-President—R. C. Bains Springville
Secretary-Treasurer—J. A. Watson Springville
County Health Officer—Ashville

Censors—J. T. Roberson, Chairman, Riverside; R. C. Bains, Springville; H. S. Awtrey, Ashville; R. A. Martin, Pell City; J. A. Watson, Springville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Awtrey, Hobart S., mc Tulane 23, sb 23, Ashville.
Bains, Richard C., mc Ala. 98, cb 07, Springville.
Boggan, Jeff. M., mc Tulane 21, sb 22, Ragland.
Callison, Caroline, mc S. C. 39, recip. S. C. 42, Greenwood, S. C.
Martin, Robert A., mc Vanderbilt 01, cb 01, Pell City.
Mitchell, John Ira, mc Ala. 12, sb 13, Pell City
Parham, John B., mc Bennett 15, recip. Ga. 23, Ashville.
Parker, Paul H., mc Tulane 37, recip. Miss. 40, Margaret. (S.)
Pruitt, Elihu Posey, mc P. & S. Atlanta 05, cb Lowndes 05, Margaret.
Rennie, Thos. L., mc Tulane 19, sb 19, Pell City.
Roberson, John T., mc Ala. 03, cb 03, Riverside.
Stewart, Russell T., mc Long Island 40, recip. N. Y. 42, Acmar.
Watson, James Alex., mc Ala. 03, cb Jefferson 03, Springville.

Total 13

PHYSICIANS NOT MEMBERS

None

(60) SUMTER COUNTY

Mobile 1876

President—R. E. Hale, Bellamy
Vice-President—L. F. Jackson, Panola
Secretary-Treasurer—R. D. Spratt, Livingston
County Health Officer—R. D. Spratt (Act.) Livingston

Censors—W. J. McCain, Chairman, Livingston; J. C. McDaniel, York; R. E. Hale, Bellamy; J. P. Scales, Livingston; R. D. Spratt, Livingston.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Byrne, David C., Jr., mc Ala. 09, sb 09, Bellamy.
Hale, Robert Eugene, mc Chattanooga 04, cb Cullman 04, Bellamy.
Harwood, Robert Ellyson, mc Ala. 00, cb 00, Gainesville.
Hester, Forest Lee, mc Tenn. 06, cb 06, Coatopa, RFD.
Hill, Robert Carl, mc Tulane 25, recip. La. 26, York.
Hunt, Horace C., mc Univ. Tenn. 32, recip. Tenn. 37, Livingston. (S.)
Jackson, C. A., mc Ala. 08, sb 08, York.
Jackson, Leonidas F., mc Ala. 01, cb Fayette 01, Panola.
McCain, William Jasper, mc Ala. 91, cb Mobile 91, Livingston.
McDaniel, Joseph Columbus, mc Ala. 04, cb 04, York.
Minus, J. A., mc Ala. 08, sb 08, Epes.
Scales, John Perkins, mc Louisville 97, cb 97, Livingston.
Spratt, Robert D., mc Tulane 02, cb 02, Livingston.
Wrenn, W. J., mc Ala. 08, sb 08, Sumterville.

Total 14

PHYSICIANS NOT MEMBERS

Boyd, Austin Francis, mc Ala. 14, sb 14, Emelle.
Gibbs, Jesse Augustus, mc Ala. 07, cb 07, Gainesville.
Jones, Joseph Francis, mc Atlanta 01, cb 01, Cuba.
Knighton, Thomas A., mc Louisville 89, cb Choctaw 90, York.

Total 4

(61) TALLADEGA COUNTY

Anniston 1886

President—J. A. Sims, Renfroe
Vice-President—R. C. Winslow, Sylacauga

Secretary—J. H. Hill, Talladega
Treasurer—D. P. Dixon, Talladega
County Health Officer—J. H. Hill, Talladega

Censors—R. C. Stewart, Chairman, Sylacauga; D. P. Dixon, Talladega; Paul Nickerson, Sylacauga; C. W. C. Moore, Talladega; A. F. Toole, Talladega.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Bradford, Cecil Rhodes, mc Vanderbilt 24, recip. Tenn. 41, E. I. du Pont de Nemours & Co., Sylacauga.
Colvin, Gus Wilson, mc Tulane 27, recip. La. 28, Lincoln.
Craddock, French H., mc Tulane 12, sb 14, Sylacauga.
Craddock, French H., Jr., mc Tulane 39, recip. La. 40, Sylacauga.
Davis, Sumner D., mc Univ. Pa. 33, sb 36, Talladega. (S.)
Deane, Helen, mc Univ. Minn. 20, recip. Minn. 43, Sylacauga.
Dixon, Duncan Patterson, mc Tulane 01, cb 01, Talladega.
Hill, James H., mc Ala. 09, sb 09, Talladega.
Malouf, George M., mc Univ. Vt. 28, recip. Vt. 45, Sylacauga.
Moore, Carey W. C., mc Ala. 13, sb 14, Talladega.
Nickerson, Paul, mc Tulane 31, sb 31, Sylacauga.
Pitchford, John D., mc Emory 22, sb 22, Sylacauga.
Salter, Clarence L., mc Ala. 11, sb 11, Talladega.
Sherman, Morris, mc LSU 40, recip. La. 41, Sylacauga.
Sims, James Anthony, mc Univ. Nashville 07, cb 07, Renfroe.
Stewart, Roscoe C., mc Ala. 13, sb 14, Sylacauga.
Stock, Robert Paul, mc S. C. 28, sb 28, Childersburg.
Teague, Eldred B., mc Pa. 34, recip. Pa. 36, Talladega. (S.)
Terry, Lucius Lamar, mc Tenn. 16, sb 16, Sylacauga.
Toole, Arthur F., mc Harvard 35, recip. Pa. 39, Talladega.
Warwick, Bishop B., mc Tulane 02, cb 02, Talladega.
Washam, Marvin, mc Tulane 23, sb 23, Talladega.
Whetstone, A. K., mc Ala. 14, sb 14, Sylacauga.
Winslow, Robert C., mc Univ. Kansas 35, recip. Kansas 36, Sylacauga.
Wren, Edward Bates, mc Ala. 90, cb 90, Talladega.

Total 25

PHYSICIANS NOT MEMBERS

Brooks, Alpheus Olin, mc Atlanta 87, cb Clay 87, Lincoln, Rt. 1 (Retired).
Brothers, Warren H. (col.), mc Meharry 08, sb 08, Talladega.
Jeter, Marvin L., mc Emory 25, sb 26, Sylacauga.
Johantgen, James F., mc Univ. Mich. 25, recip. Mich. 41, Talladega. (License revoked Aug. 6, 1945.)
Jones, Elisha Henry (col.), mc Univ. West Tenn. 09, sb 09, Talladega.
Jones, Wade Anthony (col.), mc Denver Homeopathic 01, recip. Col. 38, Sylacauga.
Kelly, J. P. (col.), mc Howard 33, sb 34, Talladega.
Owings, Thomas L., mc Emory 24, sb 24, Childersburg.
Pohl, William F., mc Jefferson 23, recip. Pa. 45, Sylacauga.

Total 9

(62) TALLAPOOSA COUNTY

Selma 1879

President—J. E. Walker, E. Tallassee
Secretary-Treasurer—L. H. Hamner, Dadeville
County Health Officer—L. H. Hamner, Dadeville

Censors—J. E. Cameron, Chairman, Alexander City; J. E. Walker, E. Tallassee; J. A. Chapman, Alexander City; J. L. Denney, Alexander City; J. T. Banks, Dadeville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Askin, Henry Ernest, mc Tulane 36, recip. La. 37, Alexander City. (S.)

Banks, Joseph Todd, mc Atlanta P. & S. 13, sb 13, Dadeville.
Bennett, J. L., mc Univ. Tenn. 31, recip. Tenn. 40, E. Tallassee.
Cameron, James E., mc Tulane 30, sb 31, Alexander City.
Chapman, James A., mc Ala. 05, cb 05, Alexander City.
Denney, John Lofton, mc Emory 21, sb 21, Alexander City.
Fargason, James F., mc Tenn. 32, sb 33, Port Sulphur, La.
Foshee, Reuben A., mc Ala. 07, cb 07, Alexander City, Rt. 5.
Hamner, Harper Taliaferro, mc Vanderbilt 89, cb Chambers 90, Camp Hill.
Hamner, Lewis Herschel, mc Vanderbilt 16 sb 16, Dadeville.
Kent, James M., mc Rush 37, sb 37, E. Tallassee. (S.)
Lamberth, Wade C., mc Wash. Univ. 35, recip. Mo. 36, Alexander City.
Newman, Lucian, mc Tenn. 31, sb 31, Dadeville. (S.)
Street, Thomas H., mc Jefferson 00, cb 00, Alexander City.
Walker, James Elliott, mc Louisville 36, recip. Ky. 41, E. Tallassee.
Walls, J. J., mc Ala. 16, sb 16, Alexander City.
Wood, William Gross, mc Emory 41, sb 42, Camp Hill. (S.)
Total 17

PHYSICIANS NOT MEMBERS

None

(63) TUSCALOOSA COUNTY

Birmingham 1877

President—J. A. Maxwell Tuscaloosa
Secretary-Treasurer—N. H. Reim Tuscaloosa
County Health Officer—W. J. Donald Tuscaloosa

Censors—J. E. Shirley, Chairman, Tuscaloosa; J. S. Tarwater, Tuscaloosa; Ruby E. L. Tyler, Tuscaloosa; S. T. Hardin, Tuscaloosa; O. L. Jordan, Tuscaloosa.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Abbott, Chas. E., Jr., mc Tulane 22, sb 22, Tuscaloosa. (S.)
Anderson, William D., mc George Washington Univ. 28, sb 29, University. (S.)
Bealle, James S., mc Univ. Nashville 06, cb 06, Holt.
Booth, James L., mc Ala. 11, sb 11, Northport.
Brook, Clarence L., mc Tulane 38, recip. La. 40, Holt.
Bush, J. D., Jr., mc Rush 36, sb 36, University.
Christian, James S., mc Ala. 12, sb 12, Tuscaloosa (Alberta City).
Clements, Ralph M., mc Rush 30, sb 32, Tuscaloosa. (S.)
Cochrane, Robert H., Jr., mc Tulane 29, sb 29, Tuscaloosa. (S.)
Collier, James P., mc Tulane 29, sb 29, Tuscaloosa. (S.)
Conwill, Gratton B., mc Tulane 26, sb 26, Tuscaloosa.
Davis, Luther, Jr., mc Wash. Univ. 34, sb 36, Tuscaloosa. (S.)
Donald, William J., mc Tenn. 26, sb 28, Tuscaloosa.
Faulk, William Mark, mc Ala. 97, cb Barbour 97, Tuscaloosa.
Fitts, Alston, mc P. & S. N. Y. 95, cb 00, Tuscaloosa.
Forney, J. M., mc Rush 26, sb 28, Tuscaloosa. (S.)
Goode, J. Henry, mc Tulane 26, sb 26, Tuscaloosa.
Graves, Stuart, mc Syracuse 11, recip. Ky. 28, University.
Guin, James C., Sr., mc Univ. Nashville 09, sb 09, Moores Bridge.
Guin, James C., Jr., mc Long Island 38, sb 40, Moore's Bridge. (S.)
Hall, George W., mc Ala. 14, sb 15, Northport.
Hamilton, Eugene H., mc Washington Univ. 38, recip. Mo. 40, University. (S.)
Hamilton, S. G., mc Ala. 02, cb Elmore 02, Tuscaloosa.
Hardin, Samuel T., mc Ala. 14, sb 14, Tuscaloosa.
Jordan, Otis Leon, mc LSU 34, recip. La. 35, Tuscaloosa.
Kay, Frank A., mc Emory 22, sb 22, Med. Arts Bldg., Birmingham.

Kennedy, Jacob Jenkins, mc Washington Univ. 98, recip. Mo. 30, Tuscaloosa.
Kirk, Arthur A., mc Ala. 97, cb Pickens 97, Tuscaloosa.
Lawrence, Toombs, mc Ala. 12, sb 12, Tuscaloosa.
Leach, Sydney, mc Univ. Va. 96, cb 97, Tuscaloosa.
Majors, W. B., mc Tulane 22, sb 23, Tuscaloosa. (S.)
Maxwell, Joseph Alston, mc Tulane 12, sb 09, Tuscaloosa.
Mayfield, Peabody B., mc Tenn. 29, sb 30, Tuscaloosa.
McBurney, Ralph, mc Rush 29, sb 30, University.
Moody, Maxwell, mc Tulane 13, sb 14, Tuscaloosa.
Oliver, John T., mc Tenn. 26, recip. Tenn. 27, Tuscaloosa.
Partlow, Rufus C., mc Ala. 12, sb 13, Tuscaloosa.
Partlow, William D., mc Ala. 01, cb St. Clair 01, Tuscaloosa.
Patton, Thomas Herbert, Jr., mc Tulane 41, sb 41, Tuscaloosa (S.)
Price, Earl Sanders, mc Emory 16, sb 16, Tuscaloosa.
Reim, Norman H., mc Univ. Tenn. 37, recip. Tenn. 42, Tuscaloosa.
Searcy, Harvey Brown, mc Univ. Mich. 07, cb 07, Tuscaloosa.
Shamblin, James Roscoe, mc Tulane 28, sb 29, Tuscaloosa.
Shamblin, John L., mc Emory 23, sb 23, Tuscaloosa.
Shamblin, R. Dawson, mc LSU 33, recip. La. 36, Tuscaloosa. (S.)
Shamblin, W. Grover, mc Ala. 19, sb 19, Tuscaloosa.
Shirley, Joseph Emil, mc Ala. 09, cb 10, Tuscaloosa.
Tarwater, James S., mc Tenn. 23, sb 23, Tuscaloosa.
Tyler, Ruby E. L., mc Tulane 25, recip. Miss. 30, Tuscaloosa.
Walker, Audiss M., mc Ala. 11, sb 11, Tuscaloosa.
Wilson, John W., mc Vanderbilt 03, cb Dallas 03, Tuscaloosa.
Total 51

PHYSICIANS NOT MEMBERS

Donehoo, John H., mc Memphis Hosp. 99, cb Pickens 05, Abernant.
Hausman, Christopher Pfeiffer, mc Ala. 10, sb 10, Coaling.
Mayfield, Surry F., mc Tulane 96, cb 96, Tuscaloosa.
McKenzie, Andrew B. (col.), mc Leonard 12, sb 12, Tuscaloosa.
Smothers, Robt. E. L., mc Ala 97, cb Lamar 03, Northport,
Total 5

(64) WALKER COUNTY

Mobile 1876

President—W. E. Moody Empire
Vice-President—T. J. Payne, Jr. Jasper
Secretary-Treasurer—J. L. Sowell Jasper
County Health Officer—A. M. Waldrop Jasper

Censors—A. C. Jackson, Chairman, Jasper; H. J. Sankey, Nauvoo; J. L. Sowell, Jasper; J. C. Gladney, Jasper; L. M. Walker, Jasper.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Andrew, James, mc Ga. 22, recip. Ga. 25, Cordova.
Baker, Reginald William, mc LSU 35, recip. La. 36, Dora.
Camp, Joseph S., mc Tulane 31, recip. La. 33, Jasper.
Donaldson, Bailus E., mc Tenn. 15, sb 26, Carbon Hill.
Gladney, James C., mc Jefferson 24, recip. Pa. 26, Jasper.
Gwin, Paul Eugene, mc Tulane 06, cb Jefferson 06, Sumiton.
Jackson, A. C., mc Tulane 16, sb 19, Jasper.
Jones, Giles W., mc Grant 01, cb 08, Parrish.
Lovett, W. J., mc Ala. 09, sb 10, Sipsey.
Manasco, Hobson, mc Vanderbilt 39, recip. Tenn. 40, Carbon Hill. (S.)
Moody, William E., mc S. C. 40, sb 40, Empire.
Payne, Thos. J., Jr., mc Tulane 35, recip. La. 36, Jasper.
Sankey, Howard J., mc Ala. 01, cb Choctaw 01, Nauvoo.
Shepherd, Robert H., mc Ala. 10, sb 10, Jasper.
Sherer, Raymond J., mc Univ. Tenn. 32, recip. Tenn. 34, Jasper. (S.)

Shores, Sterling S., Jr., mc Ala. 13, sb 14, Carbon Hill.
Simpson, John Wesley, mc Memphis 13, sb 22, Parrish.
Smith, Merle E., mc Nebraska 29, sb 30, Parrish. (S.)
Snow, William R., mc Chattanooga 08, sb 13, Jasper.
Sowell, James Lawrence, mc Tulane 91, cb Monroe 91, Jasper.
Taylor, Charter Howard, mc Ala. 18, sb 19, Bankhead.
Thetford, J. Dimmick, mc Duke 39, NBE 41, America.
Waldrop, Allen Marion, mc Univ. South 08, sb 09, Jasper
Walker, L. M., mc Ala. 11, sb 11, Jasper.
Watkins, Homer Stribling, mc Tenn. 37, sb 38, Coal Valley.
Total 25

PHYSICIANS NOT MEMBERS

Blanton, Frank, mc Grant 03, cb 06, Saragossa.
Busby, Elias D., mc Ala. 10, sb 11, Parrish, Rt. 1.
Manasco, Titus, mc Memphis 97, cb 97, Carbon Hill.
Owen, Herndon G., mc Ala. 08, sb 08, Quinton, Rt. 2.
Total 4

(65) WASHINGTON COUNTY

Tuscaloosa 1887

President—W. E. Kimbrough Chatom
Secretary-Treasurer—W. J. Blount Millry
County Health Officer—T. M. Littlepage* (Act.) Chatom

Censors—W. J. Blount, Chairman, Millry; W. E. Kimbrough, Chatom.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Blake, William A., mc Emory 38, sb 38, Chatom. (S.)
Blount, William James, mc Ala. 10, sb 10, Millry.
Kimbrough, William E., Jr., mc Ala. 15, sb 15, Chatom.
Total 3

PHYSICIANS NOT MEMBERS

None

(66) WILCOX COUNTY

Eufaula 1878

President—P. E. Godbold Pine Hill
Vice-President—R. E. Dixon Alberta
Secretary-Treasurer—J. Paul Jones Camden
County Health Officer—E. L. McIntosh Camden

Censors—Walter Fudge, Chairman, Lamison; J. Paul Jones, Camden; J. A. Thompson, Pine Apple; P. E. Godbold, Pine Hill; R. E. Dixon, Alberta.

*See also Choctaw County.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Burson, Ellis G., mc Ala. 06, cb Monroe 06, Furman.
Dixon, Robert Emmett, mc Ala. 17, sb 17, Alberta.
Fudge, Walter, mc Ala. 09, sb 09, Lamison.
Godbold, Percy E., mc P. & S. Atlanta 02, cb Marengo 02, Pine Hill.
Jones, J. Paul, Jr., mc Tulane 19, sb 19, Camden.
Mayer, Kossuth A., mc Memphis Hosp. 00, cb 00, Lower Peach Tree.
McIntosh, E. L., mc Atlanta 02, cb 02, Camden.
Moore, Will W., mc Vanderbilt 96, cb 96, Camden.
Speir, Ross C., mc Univ. Louisville 08, sb 08, Box 940, Jackson, Miss.
Thompson, John A., mc Ark. 31, sb 32, Pine Apple.
Total 10

PHYSICIANS NOT MEMBERS

Harper, Henry Y., mc Univ. Louisville 33, sb 34, Oak Hill.
McClurkin, William N., mc Ala. 17, sb 18, McWilliams, Rt.
Total 2

(67) WINSTON COUNTY

Montgomery 1888

President—T. M. Blake Double Springs
Vice-President—W. E. Howell Haleyville
Secretary-Treasurer—R. Lee Hill Haleyville
County Health Officer—H. C. McRee (Act.)* Double Spgs.

Censors—R. F. Blake, Chairman, Haleyville; W. M. Godsey, Haleyville; R. F. Blake, Haleyville; R. Lee Hill, Haleyville; W. E. Howell, Haleyville.

NAMES OF MEMBERS WITH THEIR COLLEGES AND POSTOFFICES

Blake, Robert F., mc Tenn. 38, recip. Tenn. 40, Haleyville.
Blake, Thomas M., mc Tenn. 42, recip. Tenn. 43, Double Springs.
Godsey, Wash M., mc Tenn. 29, sb 30, Haleyville.
Hill, Robert Lee, mc Ala. 09, sb 09, Haleyville.
Howell, William Edward, mc Ala. 00, cb 00, Haleyville.
Miller, Robert H., mc Chattanooga 02, cb Fayette 06, Haleyville.
Olivet, Charles Alonzo, mc Univ. Nashville 06, cb 06, Haleyville.
Total 7

PHYSICIANS NOT MEMBERS

None.

*See also Marion County.

INDEX OF MEMBERS 1945

(S.) indicates that the physician is in the service of his country

Name	Town and County	Name	Town and County
Abbott, C. E., Jr. (S.)	Tuscaloosa—Tuscaloosa	Alison, S. B.	Minter—Dallas
Abercrombie, H. S.	Petrey—Crenshaw	Allen, R. H.	Abbeville—Henry
Abernathy, T. P.	Moundville—Hale	Allen, W. E.	Sweet Water—Marengo
Abernathy, W. H.	Troy—Pike	Allgood, H. W.	Fairfield—Jefferson
Abernathy, W. L.	Flomaton—Escambia	Allison, G. M.	Gallion—Hale
Abrams, M. J. (S.)	Brewton—Escambia	Anderson, B. F.	Sellers—Montgomery
Acker, C. T.	Montevallo—Shelby	Anderson, H. L. (S.)	Birmingham—Jefferson
Acker, P. J. M.	Mobile—Mobile	Anderson, M. N.	Birmingham—Jefferson
Adams, G. W.	Huntsville—Madison	Anderson, T. J.	Greensboro—Hale
Adams, J. B.	Eufaula—Barbour	Anderson, William	Glencoe, Rt. 2—Etowah
Adams, M. S.	Anniston—Calhoun	Anderson, W. D. (S.)	University—Tuscaloosa
Adams, M. Vaun	Mobile—Mobile	Anderson, W. H.	Decatur—Morgan
Akin, J. M.	Birmingham—Jefferson	Anderson, W. O. (S.)	Alabama City—Etowah
Alexander, W. W.	Florence—Lauderdale	Andress, D. G.	Madrid—Houston
Alford, O. T.	Birmingham—Jefferson	Andrew, James	Cordova—Walker
Alison, J. F.	Selma—Dallas	Andrews, N. L.	Birmingham—Jefferson

Name	Town and County	Name	Town and County
Anthony, J. C.	Birmingham—Jefferson	Bobo, A. H.	Demopolis—Marengo
Applebaum, S. L.	Birmingham—Jefferson	Bobo, J. E. (S.)	Gadsden—Etowah
Appleton, T. H.	Collinsville—DeKalb	Bobo, J. S.	Gadsden—Etowah
Argo, Eugene	Goodwater—Coosa	Boggan, Jeff	Ragland—St. Clair
Argo, J. R.	Tarrant—Jefferson	Boggs, L. K.	Birmingham—Jefferson
Armistead, J. R.	Prichard—Mobile	Bograd, Nathan (S.)	Montgomery—Montgomery
Armour, W. S.	Birmingham—Jefferson	Bonds, W. R.	Winfield—Marion
Ashcraft, J. H.	Fayette—Fayette	Bondurant, E. D.	Mobile—Mobile
Ashcraft, V. L.	Reform—Pickens	Bonner, G. W.	Roanoke—Randolph
Ashworth, R. F.	Birmingham—Jefferson	Bonner, W. W.	Rock Mills—Randolph
Askew, William (S.)	Auburn—Lee	Booth, B. W.	Shorter—Macon
Askin, H. E. (S.)	Alexander City—Tallapoosa	Booth, J. L.	Northport—Tuscaloosa
Atwood, A. L.	Birmingham—Jefferson	Boozer, T. S.	Montgomery—Montgomery
Austin, B. F.	Montgomery—Montgomery	Botta, L. P.	Ensley, Birmingham—Jefferson
Auston, P. W.	Shawmut—Chambers	Boudreau, F. T.	Mobile—Mobile
Awtrey, H. S.	Ashville—St. Clair	Boulware, T. M.	Birmingham—Jefferson
		Bowman, J. L.	Montgomery—Montgomery
Bains, R. C.	Springville—St. Clair	Box, T. T.	Ensley, Birmingham—Jefferson
Baker, R. D.	Birmingham—Jefferson	Box, W. L.	Sulligent, Rt. 2—Lamar
Baker, R. W.	Dora—Walker	Boyd, F. H.	Opelika—Lee
Banks, J. T.	Dadeville—Tallapoosa	Brackin, O. D.	Tuscumbia—Colbert
Barber, H. D. (S.)	Fayette—Fayette	Bradford, C. R.	Sylacauga—Talladega
Barber, W. J.	Butler—Choctaw	Bradford, D. C. (S.)	Birmingham—Jefferson
Barclift, W. C., Jr. (S.)	Birmingham—Jefferson	Bragg, E. G.	Victoria (Mail Jack)—Coffee
Barker, H. E.	Boaz—Marshall	Bragg, J. C.	Decatuer—Morgan
Barnard, R. M.	Arab—Marshall	Branch, J. L. (S.)	Montgomery—Montgomery
Barnes, J. M. (S.)	Montgomery—Montgomery	Branham, B. S.	Birmingham—Jefferson
Barron, J. M.	Fairfield—Jefferson	Brannon, R. M.	Birmingham—Jefferson
Bartlett, H. S. (S.)	Montgomery—Montgomery	Branscomb, Louise (S.)	Birmingham—Jefferson
Bass, H. W.	Gadsden—Etowah	Branyon, A. C.	Fayette—Fayette
Bass, J. B. (S.)	Gadsden—Etowah	Braswell, W. C.	Elba—Coffee
Bates, I. C.	Dothan—Houston	Bridges, Terrell	Montevallo—Shelby
Batson, W. P.	Fairfield—Jefferson	Brindley, T. B.	Hartselle—Morgan
Baumhauer, J. H.	Mobile—Mobile	Bristow, B. T.	Bessemer—Jefferson
Bayles, Lewis E.	Anderson—Lauderdale	Britt, W. S., Jr. (S.)	Eufaula—Barbour
Bayles, Louie E.	Anderson—Lauderdale	Britton, J. W.	Foley—See Calhoun
Bayne, R. D.	Selma—Dallas	Britton, W. R. (S.)	Montgomery—Montgomery
Bazar, P. S. (S.)	Montgomery—Montgomery	Broach, N. L.	Pine Level—Montgomery
Bealle, J. S.	Holt—Tuscaloosa	Brook, C. L.	Holt—Tuscaloosa
Beard, R. B.	Troy—Pike	Brooks, J. O.	Hamilton—Marion
Beasley, J. W.	Geneva—Geneva	Brooks, O. J.	Huntsville—Madison
Beatty, T. D. (S.)	Cullman—Cullman	Broughton, W. E.	Perdue Hill—Monroe
Beck, C. K. (S.)	Troy—Pike	Browder, E. A.	Stevenson—Jackson
Beck, J. E.	Mobile—Mobile	Brown, A. J. (S.)	Mobile—Mobile
Becton, J. A.	Birmingham—Jefferson	Brown, E. T.	Cleveland—Blount
Beddow, W. H.	Birmingham—Jefferson	Brown, H. M. (S.)	Birmingham—Jefferson
Bedsole, J. G.	Jackson—Clarke	Brown, J. L.	Gadsden—Etowah
Bell, J. M.	Mobile—Mobile	Brown, J. M.	Gadsden—Etowah
Belue, J. O.	Athens—Limestone	Brown, James Rias	Hamilton—Marion
Benkwith, K. B. (S.)	Montgomery—Montgomery	Brown, John Richard	Florence—Lauderdale
Bennett, C. R.	Eufaula—Barbour	Brown, M. W.	Birmingham—Jefferson
Bennett, J. L.	E. Tallassee—Tallapoosa	Brownlee, L. G.	Birmingham—Jefferson
Bennett, T. L., Jr.	Florence—Lauderdale	Bruce, B. S.	Opelika—Lee
Benson, R. C. (S.)	Birmingham—Jefferson	Brunson, E. T.	Samson—Geneva
Berrey, I. C.	Birmingham—Jefferson	Bryan, J. L.	Greenville—Butler
Berrey, R. R.	Birmingham—Jefferson	Bryars, J. F.	Bay Minette—Baldwin
Berry, R. A.	Birmingham—Jefferson	Buchanan, J. P.	Montgomery—Montgomery
Berry, W. T.	Birmingham—Jefferson	Burch, J. T.	Hartselle—Morgan
Bickerstaff, J. W.	Montgomery—Montgomery	Burdeshaw, H. B.	Dothan—Houston
Bird, B. C.	Montgomery—Montgomery	Burdeshaw, S. L.	Headland—Henry
Black, J. W.	Ensley, Birmingham—Jefferson	Buresch-Henke, H.	Montgomery—Montgomery
Blackshear, G. W.	Opelika—Lee	Burke, R. P.	Montgomery—Montgomery
Blair, E. S.	Gadsden—Etowah	Burkett, W. T.	Dothan—Houston
Blake, R. F.	Haleyville—Winston	Burkhead, DeWitt	Opelika—Lee
Blake, Theo. M.	Toulminville—Mobile	Burleson, J. R.	Hamilton—Marion
Blake, Thos. M.	Double Springs—Winston	Burns, C. R. D. (S.)	Alabama City—Etowah
Blake, W. A. (S.)	Chatom—Washington	Burns, J. D.	Russellville—Franklin
Blake, W. H., Jr.	Sheffield—Colbert	Burns, W. A.	Birmingham—Jefferson
Blakeney, A. L.	Newtonville—Fayette	Burns, W. W.	Selma—Dallas
Blank, W. H.	Birmingham—Jefferson	Burson, E. G.	Furman—Wilcox
Blanton, Russell	Birmingham—Jefferson	Burwell, P. K.	Montgomery—Montgomery
Blewett, Means	Citronelle—Mobile	Busby, S. S.	Hamilton—Marion
Block, W. H. (S.)	Hartselle—Morgan	Bush, D. A.	New Brockton—Coffee
Blount, W. J.	Milry—Washington	Bush, J. D., Jr.	University—Tuscaloosa
Blue, Jas. H.	Bessemer—Jefferson	Buzbee, J. E.	Ft. Payne—DeKalb
Blue, Jno. H.	Montgomery—Montgomery	Byrne, D. C., Jr.	Bellamy—Sumter

Name	Town and County	Name	Town and County
Caffey, B. F.	Choccolocco—Calhoun	Cobbs, B. W.	Montgomery—Montgomery
Caine, V. H.	Orrville—Dallas	Cochran, J. P.	Birmingham—Jefferson
Caldwell, E. V.	Huntsville—Madison	Cochrane, R. H. (S.)	Tuscaloosa—Tuscaloosa
Caldwell, H. A.	Birmingham—Jefferson	Cocke, W. T.	Demopolis—Marengo
Callaway, Eugene	Selma—Dallas	Cogburn, H. R.	Mobile—Mobile
Callaway, R. R. (S.)	Birmingham—Jefferson	Coggin, F. R. B.	Waverly—See Lee
Callison, Caroline	Greenwood, S. C.—See St. Clair	Cohen, N. R. (S.)	Montgomery—Montgomery
Cameron, J. E.	Alexander City—Tallapoosa	Cole, L. G.	Talladega—See Clay
Cameron, T. C.	Faunsdale—Marengo	Coleman, G. C.	Fairfield—Jefferson
Camp, J. S.	Jasper—Walker	Coleman, L. S.	Millport—Lamar
Camp, W. A. (S.)	Cullman—Cullman	Coleman, W. E.	Birmingham—Jefferson
Campbell, D. J.	Dozier, RFD—Covington	Colley, J. O., Jr.	Troy—Pike
Campbell, J. A.	Dothan—Houston	Collier, J. P. (S.)	Tuscaloosa—Tuscaloosa
Campbell, W. J.	Center—Cherokee	Collier, S. W.	Birmingham—Jefferson
Cannady, N. B.	Dothan—Houston	Collins, C. D. (S.)	Birmingham—Jefferson
Cannon, D. L.	Montgomery—Montgomery	Collins, H. C. (S.)	Montgomery—Montgomery
Cannon, E. R.	Vredenburgh—Monroe	Collins T. A.	Birmingham—Jefferson
Cantrell, W. T.	Alabama City—Etowah	Colquitt, C. J.	Bessemer—Jefferson
Carmichael, J. L.	Birmingham—Jefferson	Colvin, G. W.	Lincoln—Talladega
Carmichael, J. N.	Fairfield—Jefferson	Comer, E. T. (S.)	Eufaula—Barbour
Carmichael, W. M.	Fairfield—Jefferson	Comer, R. T.	Birmingham—Jefferson
Carpenter, B. S.	Fairfield—Jefferson	Compton, W. W.	Fairfield—Jefferson
Carpenter, J. A.	New Hope—Madison	Connell, I. L. (S.)	Grove Hill—Clarke
Carpenter, J. L.	New Hope—Madison	Constantine, K. W.	Birmingham—Jefferson
Carraway, Alfred	Gadsden—Etowah	Conwell, H. E.	Birmingham—Jefferson
Carraway, B. M.	Birmingham—Jefferson	Conwill, G. B.	Tuscaloosa—Tuscaloosa
Carraway, C. N.	Birmingham—Jefferson	Cooley, B. S.	Birmingham—Jefferson
Carter, H. R., Jr.	Birmingham—Jefferson	Copeland, M. A.	Birmingham—Jefferson
Carter, Melson B. (S.)	Birmingham—Jefferson	Cornelius, L. B.	Cullman, Rt. 5—Cullman
Carter, W. R.	Repton—Conecuh	Cornwell, R. A.	Birmingham—Jefferson
Casey, A. E.	Birmingham—Jefferson	Corrington, D. D.	Talladega—Elmore
Casey, M. L.	Henagar—DeKalb	Coston, H. R.	Birmingham—Jefferson
Cashman, G. A.	Florence—Lauderdale	Coston, R. M. (S.)	Birmingham—Jefferson
Cawthon, E. W.	Plateau—Mobile	Cothran, R. M.	Birmingham—Jefferson
Cermak, E. C.	Birmingham—Jefferson	Cotlin, C. S.	Wetumpka—Elmore
Chalker, B. C.	Dothan—Houston	Couch, E. H.	Guntersville—Marshall
Chandler, J. R.	Bessemer—Jefferson	Cowden, A. M.	Crichton—Mobile
Chapman, C. H.	Andalusia—Covington	Cowles, A. D.	Ramer—Montgomery
Chapman, F. E.	Montgomery—Montgomery	Cowles, T. D.	Troy—Pike
Chapman, J. A.	Alexander City—Tallapoosa	Cox, D. D.	Sheffield—Colbert
Chapman, J. C.	Birmingham—Jefferson	Coyle, D. J. (S.)	Birmingham—Jefferson
Chapman, J. P.	Selma—Dallas	Craddock, French	Sylacauga—Talladega
Chapman, L. W.	Jackson—Clarke	Craddock, F. H., Jr.	Sylacauga—Talladega
Chapman, W. S.	Jackson—Clarke	Craig, W. J.	New Orleans—See Franklin
Chason, O. L.	Mobile—Mobile	Crawford, J. H.	Columbiana—Shelby
Cheatham, T. A.	Birmingham—Jefferson	Crawford, J. M.	Arab—Marshall
Chenault, E. M.	Decatur—Morgan	Crawford, R. D., Jr.	Dothan—Houston
Chenault, J. M. (S.)	Decatur—Morgan	Creely, H. C.	Birmingham—Jefferson
Chenault, F. L.	Decatur—Morgan	Crook, W. R.	Elba—Coffee
Cheney, H. W.	Florence—Lauderdale	Cross, E. H., Jr.	Gadsden—Etowah
Cherry, Alfred (S.)	Birmingham—Jefferson	Crowder, J. W.	West Blocton—Bibb
Chilton, A. M. (S.)	Anniston—Calhoun	Crutcher, J. S., Jr. (S.)	Athens—Limestone
Chippis, H. D. (S.)	Birmingham—Jefferson	Culpepper, R. A.	Cullman—Cullman
Chisolm, J. R.	Marion Junction—Dallas	Cunningham, J. A.	Birmingham—Jefferson
Chisolm, J. S.	Selma—Dallas	Cunningham, W. A.	Birmingham—Jefferson
Chisolm, R. P.	Selma, Rt. 4—Dallas	Curtis, R. C.	Calera—Shelby
Christian, J. S.	Alberta City (Mail Tuscaloosa)—Tusca.		
Clack, J. T.	Wadley—Randolph	Dabney, M. Y.	Birmingham—Jefferson
Clanton, A. W.	Millport—Lamar	Dailey, J. J.	Tunnel Springs—Monroe
Clapp, H. W. (S.)	Montgomery—Montgomery	Daly, E. W.	Birmingham—Jefferson
Clark, H. G. (S.)	Clayton—Barbour	Daniel, W. A., Jr.	Montgomery—Montgomery
Clark, R. D.	Gadsden—Etowah	Darby, H. A.	Athens—Limestone
Clarke, N. R. (S.)	Mobile—Mobile	Darden, W. H. (S.)	Birmingham—Jefferson
Clayton, E. C.	Leeds—Jefferson	Davenport, L. O.	Birmingham, Rt. 2—Jefferson
Clayton, Price	Russellville—Franklin	Daves, J. G.	Cullman—Cullman
Cleere, R. C.	Danville—Morgan	Davidson, A. W.	Bessemer—Jefferson
Clements, F. H.	Birmingham—Jefferson	Davidson, J. S.	Thomasville—Clarke
Clements, R. M. (S.)	Tuscaloosa—Tuscaloosa	Davidson, M. T. (S.)	Birmingham—Jefferson
Cleveland, C. H.	Anniston—Calhoun	Davie, M. S.	Dothan—Houston
Cleveland, C. M.	Mobile—Mobile	Davie, N. T.	Anniston—Calhoun
Cleveland, Hunt (S.)	Anniston—Calhoun	Davis, C. A.	Kennedy—Lamar
Climo, H. J. (S.)	Montgomery—Montgomery	Davis, C. S.	Mobile—Mobile
Cloud, R. E.	Ensley, Birmingham—Jefferson	Davis, J. L.	Gordo—Pickens
Cloyd, T. D.	Florence—Lauderdale	Davis, John Walter, Jr. (S.)	Montgomery—Montgomery
Clyde, W. A.	Birmingham—Jefferson	Davis, Julian Walker	Birmingham—Jefferson
Cobb, W. F.	Frisco City—Monroe	Davis, L. C.	Gordo—Pickens

Name	Town and County	Name	Town and County
Davis, Luther, Jr. (S.)	Tuscaloosa—Tuscaloosa	Emens, E. R.	Decatur—Morgan
Davis, S. D. (S.)	Talladega—Talladega	Emerson, J. F.	Spring Garden—Cherokee
Dawson, H. P.	Montgomery—Montgomery	England, F. T. (S.)	Mobile—Mobile
Dawson, J. R.	Uniontown—Perry	England, J. T.	Mobile—Mobile
Day, Edward	Maplesville—Chilton	Eskeew, M. H.	Uniontown—Perry
Dean, Leon	Ensley, Birmingham—Jefferson	Evans, K. P.	Boothton—Shelby
Deane, Helen	Sylacauga—Talladega	Evers, Ray	Andalusia—Covington
DeArmas, C. R.	Ft. McClellan—Calhoun	Eversole, W. C.	Vincent—Shelby
Deaver, C. W.	Birmingham—Jefferson		
Deaver, W. T.	Adamsville, Rt. 2—Jefferson	Falletta, P. T.	Birmingham—Jefferson
Dedman, J. E.	Betterton, Md.—See Jefferson	Fargason, J. F.	Port Sulphur, La.—See Tallapoosa
DeJanney, N. H.	Gadsden—Etowah	Farish, C. G. (S.)	Moulton—Lawrence
Denison, G. A.	Birmingham—Jefferson	Farmer, H. R.	Fairfield—Jefferson
Denney, J. L.	Alexander City—Tallapoosa	Farrar, W. C.	Birmingham—Jefferson
Dennis, J. W.	Auburn—Lee	Farrior, J. H. (S.)	Montgomery—Montgomery
Dennis, T. E.	Monroeville—Monroe	Faucett, DeWitt	Gadsden—Etowah
Denson, F. H.	Bessemer—Jefferson	Faucett, G. L.	Gadsden—Etowah
Denton, Marvin	Oneonta—Blount	Faulk, W. M.	Tuscaloosa—Tuscaloosa
Denton, N. C.	Oneonta—Blount	Ferguson, Burr	Birmingham—Jefferson
DeRamus, W. H. (S.)	Selma—Dallas	Ferry, J. A.	Birmingham—Jefferson
Dickey, E. W.	Hazel Green—Madison	Feulner, C. D.	Selma—Dallas
Dillon, J. F., 3rd.	Montgomery—Montgomery	Finlay, A. G.	Guntersville—Marshall
Dilworth, T. E., Jr.	Huntsville—Madison	Finley, W. A.	Cherokee—Colbert
Dinsmore, A. J.	Decatur—Morgan	Finney, J. O. (S.)	Gadsden—Etowah
Dix, A. S.	Mobile—Mobile	Fisher, C. J.	Florence—Lauderdale
Dixon, D. P.	Talladega—Talladega	Fisher, G. E.	Birmingham—Jefferson
Dixon, R. E.	Alberta—Wilcox	Fitts, Alston	Tuscaloosa—Tuscaloosa
Dodge, E. F.	New York—See Montgomery	Flowers, J. H.	Newton, RFD—Houston
Dodson, J. H.	Mobile—Mobile	Flowers, P. R.	Dothan—Houston
Dodson, R. B.	Cullman—Cullman	Floyd, H. T.	Auburn—Lee
Doherty, D. H.	Selma—Dallas	Floyd, M. T.	Ft. Payne—DeKalb
Donald, C. J.	Birmingham—Jefferson	Floyd, S. J.	Phoenix City—Russell
Donald, D. C.	Birmingham—Jefferson	Floyd, T. J.	Abbeville—Henry
Donald, J. M. (S.)	Birmingham—Jefferson	Folsom, M. A.	Jack—Coffee
Donald, P. Y.	Selma—Dallas	Fonde, G. H.	Mobile—Mobile
Donald, T. C.	Birmingham—Jefferson	Fonde, W. G. (S.)	Chickasaw—Mobile
Donald, W. J.	Tuscaloosa—Tuscaloosa	Fonville, W. D.	Birmingham—Jefferson
Donaldson, B. E.	Carbon Hill—Walker	Forcheimer, H. H.	Mobile—Mobile
Donnelly, C. A.	Birmingham—Jefferson	Ford, C. E.	Roanoke—Randolph
Dorough, J. L.	Heflin—Cleburne	Ford, C. H.	Birmingham—Jefferson
Douglas, G. F.	Birmingham—Jefferson	Ford, H. G. (S.)	Gadsden—Etowah
Douglas, G. F., Jr. (S.)	Birmingham—Jefferson	Ford, J. C.	Luverne—Crenshaw
Douglass, John	Birmingham—Jefferson	Ford, J. W. (S.)	Gadsden, Rt. 2—Etowah
Dowling, H. B., Jr.	Mobile—Mobile	Ford, W. F.	Gadsden, Rt. 2—Etowah
Dowling, J. D.	Knoxville, Tenn.—See Jefferson	Forney, J. M. (S.)	Tuscaloosa—Tuscaloosa
Drennen, Earle	Birmingham—Jefferson	Foshee, R. A.	Alexander City, Rt. 5—Tallapoosa
DuBois, J. S.	Enterprise—Coffee	Foster, J. O.	Luverne—Crenshaw
Duncan, M. M.	Huntsville—Madison	Fowler, J. T.	Birmingham—See Houston
Duncan, W. W.	Aliceville—Pickens	Fox, B. A.	Birmingham—Jefferson
Dunn, J. E.	Wetumpka—Elmore	Fox, C. A.	Birmingham—Jefferson
Dunn, M. C.	Wetumpka—Elmore	Frank, H. W.	Gadsden—Etowah
Dunning, G. J.	Linden—Marengo	Franklin, C. M.	Union Springs—Bullock
DuPree, J. W.	Opelika, Rt. 2—Lee	Franklin, H. G.	Thorsby—Chilton
Du Puy, A. J.	Athens—Limestone	Frantz, W. E.	Gadsden—Etowah
Durden, J. D.	Anniston—Calhoun	Frazer, B. F.	Lafayette—Chambers
Durick, S. A.	Bessemer—Jefferson	Frazer, E. B. (S.)	Mobile—Mobile
Durrett, E. B.	Bessemer—Jefferson	Fudge, Walter	Lamison—Wilcox
Dyar, J. P.	Moulton—Lawrence		
		Gaillard, S. S. (S.)	Mobile—Mobile
Eddins, W. W.	Monroeville—Monroe	Gaillard, T. H.	Magnolia—Marengo
Edge, O. N.	Troy—Pike	Gaines, C. D.	Birmingham—Jefferson
Edwards, D. B.	Tyler, RFD—Dallas	Gaines, H. F.	Fairfield—Jefferson
Edwards, E. H., Jr.	Leeds—Jefferson	Gaines, M. T.	Mobile—Mobile
Edwards, G. T.	Selma, Rt. 1—Dallas	Gaines, W. D.	Atmore—See Chambers
Edwards, J. E. H.	McCalla—Jefferson	Galloway, F. W.	Floral—Covington
Edwards, W. A. (S.)	Notasulga—Macon	Garber, J. R.	Birmingham—Jefferson
Ehlert, W. E.	Selma—Dallas	Garlington, R. B.	Brilliant—Marion
Eiland, J. D.	Verbena—Chilton	Garlington, W. H.	Birmingham—Jefferson
Eiland, R. J.	Clanton—Chilton	Garmon, C. N.	Rt. 2, Bessemer—Jefferson
Elgin, C. E.	Praco—Jefferson	Garrison, J. E.	Birmingham—Jefferson
Elkourie, H. A.	Birmingham—Jefferson	Gary, Loren, Jr.	Tusculumbia—Colbert
Elkourie, L. A.	Birmingham—Jefferson	Gary, R. E.	Tusculumbia—Colbert
Elliott, H. R., Jr.	Fairfield—Jefferson	Gay, A. J.	Roanoke—Randolph
Ellis, J. T.	Dothan—Houston	Gay, C. P.	Geneva—Geneva
Elrod, R. F.	Ft. Payne—DeKalb	Gay, J. S.	Ashland—Clay
Embry, J. C.	Vincent—Shelby		

Name	Town and County	Name	Town and County
Gay, N. S.	Whistler—Mobile	Hagood, D. S.	Montgomery—Montgomery
Gay, O. F. (S.)	Greenville—Butler	Hagood, J. W.	Evergreen—Conecuh
Gehrken, H. S.	Birmingham—Jefferson	Haigler, J. R.	Montgomery—Montgomery
Gelperin, Jules (S.)	Birmingham—Jefferson	Hail, R. A.	Robertsdale—Baldwin
Gewin, E. E.	Birmingham—Jefferson	Hairston, W. G.	Birmingham—Jefferson
Gibson, E. L.	Enterprise—Coffee	Haisten, D. C.	Dothan—Houston
Gill, D. G. (S.)	Montgomery—Montgomery	Hale, R. E.	Bellamy—Sumter
Gillespie, J. P., Jr. (S.)	Gadsden—Etowah	Hall, G. W.	Northport—Tuscaloosa
Gillespy, R. R. (S.)	Birmingham—Jefferson	Hall, S. P. Jr.	Scottsboro—Jackson
Gilliland, Martha J.	Birmingham—Jefferson	Haller, E. N.	Ft. Payne—DeKalb
Gipson, A. C.	Gadsden—Etowah	Hamil, J. Y.	Decatur—Morgan
Givhan, E. G., Jr. (S.)	Birmingham—Jefferson	Hamilton, E. H. (S.)	University—Tuscaloosa
Gladney, J. C.	Jasper—Walker	Hamilton, G. C.	Piedmont—Calhoun
Glasgow, R. D.	Fairfield—Jefferson	Hamilton, S. G.	Tuscaloosa—Tuscaloosa
Glasgow, R. S.	Adamsville—Jefferson	Hamm, Pat	Hartselle—Morgan
Glasgow, T. J.	Russellville—Franklin	Hamner, H. T.	Camp Hill—Tallapoosa
Glazer, Harry (S.)	Montgomery—Montgomery	Hamner, L. H.	Dadeville—Tallapoosa
Godard, C. G.	Fairhope—Baldwin	Hamner, S. C.	Andalusia—Covington
Godbold, J. C.	Whatley—Clarke	Hamrick, R. A. (S.)	Birmingham—Jefferson
Godbold, P. E.	Pine Hill—Wilcox	Hamrick, R. H.	Birmingham—Jefferson
Godsey, Wash	Haleyville—Winston	Hanby, E. K.	Attalla—Etowah
Goff, W. H.	Rockford—Coosa	Hand, L. M.	Demopolis—Marengo
Golden, W. C.	Clanton—Chilton	Hankins, G. M. (S.)	Fairfield—Jefferson
Goldner, Harry	Birmingham—Jefferson	Hannon, W. C.	Mobile—Mobile
Goldsmith, E. F. (S.)	Prichard—Mobile	Hansard, W. S.	Henagar, RFD—DeKalb
Goldstein, Ben	Birmingham—Jefferson	Hardin, S. T.	Tuscaloosa—Tuscaloosa
Goley, D. E.	Gadsden—Etowah	Hardy, W. B.	Birmingham—Jefferson
Goodall, A. G.	Birmingham—Jefferson	Hargis, A. S., Jr. (S.)	Birmingham—Jefferson
Goode, J. H.	Tuscaloosa—Tuscaloosa	Hargis, E. H.	Birmingham—Jefferson
Gordon, G. R. (S.)	Birmingham—Jefferson	Harmon, J. S.	Chickasaw—See Elmore
Gordon, S. A.	Marion—Perry	Harper, R. E.	Tuscumbia—Colbert
Gould, K. N.	Wilsonville—Shelby	Harper, W. F.	Selma—Dallas
Gragg, V. J.	Magnolia Springs—See Chilton	Harris, A. B.	Birmingham—Jefferson
Graham, A. H.	Opelika—Lee	Harris, Charlton	Indian Rock, Fla.—See Jefferson
Graham, G. S., Jr.	Birmingham—Jefferson	Harris, Edward A.	Fairfield—Jefferson
Graham, J. B.	Mobile—Mobile	Harris, Esau A.	Bessemer—Jefferson
Granger, F. G.	Ashford—Houston	Harris, F. W.	Birmingham—Jefferson
Grant, C. A.	Goshen—Pike	Harris, H. A.	Birmingham—Jefferson
Grasberger, J. C. (S.)	Bessemer—Jefferson	Harris, H. P.	Montgomery—Montgomery
Graves, A. W.	Gadsden—Etowah	Harris, Seale	Birmingham—Jefferson
Graves, Stuart	University—Tuscaloosa	Harrison, K. W.	Enterprise—Coffee
Gray, E. W.	Florence—Lauderdale	Harrison, W. G.	Birmingham—Jefferson
Gray, H. E.	Anniston—Calhoun	Hartung, C. F.	Bridgeport—Jackson
Gray, H. W.	Crichton—Mobile	Harwood, R. E.	Gainesville—Sumter
Grayson, A. T.	New Market—Madison	Hatchett, W. C.	Hollywood, Fla.—See Madison
Grayson, R. J. (S.)	Selma—Dallas	Haun, C. A.	Ensley, Birmingham—Jefferson
Green, A. H. (S.)	Birmingham—Jefferson	Hayes, C. P.	Elba—Coffee
Green, Elbert Paul	Birmingham—Jefferson	Hayes, J. P.	Clanton—Chilton
Green, Elbert Pierce	Jacksonville—Calhoun	Haygood, J. K.	Union Springs—Bullock
Green, R. C.	Birmingham—Jefferson	Hays, J. H.	Birmingham—Jefferson
Greene, G. B. (S.)	Birmingham—Jefferson	Hays, Luther	Cullman—Cullman
Greene, J. H.	Whistler—Mobile	Heacock, J. D.	Birmingham—Jefferson
Greer, H. D.	Decatur—Morgan	Heath, M. J.	Ensley, Birmingham—Jefferson
Gresham, G. L.	Speigner—Elmore	Heflin, Wyatt	Birmingham—Jefferson
Gresham, W. A.	Russellville—Franklin	Heiter, W. L.	Mobile—Mobile
Griffin, G. W. (S.)	Birmingham—Jefferson	Henderson, A. D. (S.)	Mobile—Mobile
Griffin, I. H.	Moundville—Hale	Henderson, E. A.	Fairfax—Chambers
Griffith, H. A.	Sheffield—Colbert	Henderson, H. H.	Greenville—Butler
Grimes, O. R.	Gadsden—Etowah	Henderson, H. H., Jr.	Fairfield—Jefferson
Gross, C. M.	Cullman, Rt. 3—Cullman	Hendrix, R. Walker (S.)	Evergreen—Conecuh
Gross, Esther	Anniston—Calhoun	Herrin, C. E.	Cullman—Cullman
Gross, G. D. (S.)	Anniston—Calhoun	Hester, F. L.	Coatopa, RFD—Sumter
Gross, R. M.	Cullman—Cullman	Hicks, D. M.	Cottonwood—Houston
Grote, C. A.	Huntsville—Madison	Hicks, J. B.	Montgomery—Montgomery
Guest, R. J., Jr.	Ft. Payne—DeKalb	Hightower, R. G. (S.)	Pratt City—Jefferson
Guice, C. L.	Gadsden—Etowah	Hill, H. W.	Carrollton—Pickens
Guin, J. C., Sr.	Moore's Bridge—Tuscaloosa	Hill, J. F.	Montgomery—Montgomery
Guin, J. C., Jr. (S.)	Moore's Bridge—Tuscaloosa	Hill, J. H.	Talladega—Talladega
Gully, V. S. (S.)	Butler—Choctaw	Hill, L. L.	Montgomery—Montgomery
Gunter, W. A., 3rd (S.)	Montgomery—Montgomery	Hill, L. L., Jr. (S.)	Montgomery—Montgomery
Guthrie, R. F.	Birmingham—Jefferson	Hill, R. C.	York—Sumter
Guyton, T. M.	Decatur—Morgan	Hill, Robert Lee	Haleyville—Winston
Gwin, P. E.	Sumiton—Walker	Hill, Robert Leroy	Winfield—Marion
Haas, T. D.	Mobile—Mobile	Hill, R. S.	Montgomery—Montgomery
Habeeb, Alfred	Fairfield—Jefferson	Hill, V. H. (S.)	Mobile—Mobile
		Hillhouse, J. L.	Birmingham—Jefferson

Name	Town and County	Name	Town and County
Hilson, Lewis	Dothan—Houston	James, N. G.	Hayneville—Lowndes
Hilt, J. L.	Lineville—Clay	James, S. H.	Outwood, Ky.—See Jackson
Hines, J. A.	Siluria—Shelby	Jenkins, J. F.	Birmingham—Jefferson
Hinton, L. H.	Mobile—Mobile	Jenkins, J. F., Jr. (S.)	Birmingham—Jefferson
Hirsh, J. E.	Birmingham—Jefferson	Johns, L. J.	Birmingham—Jefferson
Hodge, E. K.	Fairfax—Chambers	Johnson, C. E. (S.)	Lineville—Clay
Hodges, E. Julian	Scottsboro—Jackson	Johnson, Claud	Montgomery—Montgomery
Hodges, Rayford	Scottsboro—Jackson	Johnson, G. T. (S.)	Mobile—Mobile
Hodgson, P. M.	Stockton—Baldwin	Johnson, H. N.	Montgomery—Montgomery
Hogan, E. P.	Birmingham—Jefferson	Johnson, J. C.	Hamilton—Marion
Hogan, G. A.	Birmingham—Jefferson	Johnston, F. T.	Brundidge—Pike
Hogan, M. D.	Boonton, N. J.—See Jefferson	Johnston, Hardee	Birmingham—Jefferson
Hogan, R. E.	Ensley, Birmingham—Jefferson	Johnston, I. L.	Samson—Geneva
Holding, B. F.	Montgomery—Montgomery	Johnston, J. C.	Chapman—Butler
Holladay, J. J., Jr. (S.)	Gadsden—Etowah	Johnston, J. D.	Brundidge—Pike
Holler, C. A. F. (S.)	Ft. Payne—DeKalb	Jones, C. T.	Newville—Henry
Holley, A. F.	Brewton—Escambia	Jones, G. W.	Parrish—Walker
Holley, J. F.	Lockhart—Covington	Jones, I. N.	Greensboro—Hale
Holliman, J. D.	Huntsville—Madison	Jones, J. A., Jr. (S.)	Opelika—Lee
Hollis, L. W.	Mobile—Mobile	Jones, J. P.	Camden—Wilcox
Hollis, M. C.	Winfield—Marion	Jones, T. J.	Marion—Perry
Holman, N. W.	Ozark—Dale	Jones, U. L.	Brooklyn—Conecuh
Holmes, W. C. (S.)	Foley—Baldwin	Jones, Walter C.	Birmingham—Jefferson
Hope, J. C.	Mobile—Mobile	Jones, Wm. C.	Mobile—Mobile
Horn, J. R.	Bessemer—Jefferson	Jones, W. N.	Birmingham—Jefferson
Horn, S. W.	Bessemer—Jefferson	Jordan, H. C.	Robertsdale—Baldwin
Horsley, H. L.	Boaz—Marshall	Jordan, H. W.	Robertsdale—Baldwin
Hough, J. S.	Montgomery—Montgomery	Jordan, James	McKenzie—Butler
Houston, H. S.	Oak Park, Ill.—See Montgomery	Jordan, J. S. (S.)	Birmingham—Jefferson
Howard, P. J.	Mobile—Mobile	Jordan, Jos. Wiley	Ashland—Clay
Howe, C. D.	Birmingham—Jefferson	Jordan, O. L.	Tuscaloosa—Tuscaloosa
Howell, J. P. (S.)	Selma—Dallas	Jordan, W. F.	Huntsville—Madison
Howell, J. V.	Marion—Perry	Jordan, W. M.	Birmingham—Jefferson
Howell, W. E.	Haleyville—Winston	Joseph, K. N.	Birmingham—Jefferson
Howle, J. A.	Hartselle—Morgan	Justice, J. D.	Birmingham—Jefferson
Hubbard, L. H. (S.)	Wilton—Shelby	Kahn, S. A. (S.)	Birmingham—Jefferson
Hubbard, L. W.	Tarrant—Jefferson	Kaiser, E. N. (S.)	Montgomery—Montgomery
Hubbard, T. B.	Montgomery—Montgomery	Kay, F. A.	Birmingham—See Tuscaloosa
Huckaby, W. R.	Guntersville—Marshall	Kelley, R. H.	Pompton Lake, N. J.—See Jefferson
Huddleston, R. L.	Deatsville—Elmore	Kelly, A. L.	Kansas City, Mo.—See Geneva
Hudson, P. D. (S.)	Opelika—Lee	Kelly, E. L.	Evergreen—Conecuh
Huey, T. F.	Anniston—Calhoun	Kenan, James	Selma—Dallas
Huey, T. F., Jr. (S.)	Anniston—Calhoun	Kendrick, J. E. (S.)	Greenville—Butler
Hufstедler, J. G.	Wilson Dam—Colbert	Kennedy, B. H., Jr.	Birmingham—Jefferson
Hughes, B. A.	Birmingham—Jefferson	Kennedy, F. F. (S.)	Birmingham—Jefferson
Hughes, J. W.	Decatur—Morgan	Kennedy, J. J.	Tuscaloosa—Tuscaloosa
Hughes, M. P.	Gadsden—Etowah	Kennedy, W. C., Jr.	Florence—Lauderdale
Hughes, V. P.	Cullman—Cullman	Kent, J. M. (S.)	E. Tallassee—Tallapoosa
Hunt, H. C. (S.)	Livingston—Sumter	Kesmodel, K. F.	Birmingham—Jefferson
Hunt, M. C.	Fairfax—Chambers	Keyton, J. A.	Dothan—Houston
Hunt, Marston	Boaz—Marshall	Killian, C. D.	Ft. Payne—DeKalb
Hunter, W. S. (S.)	Bessemer—Jefferson	Killingsworth, N. W.	Brundidge—Pike
Hurst, J. C.	Opp—Covington	Kilpatrick, G. C.	Mobile—Mobile
Hutto, A. S.	Pinson—Jefferson	Kilpatrick, L. A.	E. Gadsden—Etowah
Hyatt, E. M.	Albertville—Marshall	Kimbrough, C. E.	Linden—Marengo
Inge, F. M.	Mobile—Mobile	Kimbrough, R. M.	Powderly—Jefferson
Inge, J. T.	Mobile—Mobile	Kimbrough, W. E.	Chatom—Washington
Ingram, G. H. (S.)	Tuscaloosa—See Mobile	Kimmey, J. M. (S.)	Anniston—Calhoun
Irons, R. A.	Thomasville—Clark	Kincannon, L. T. (S.)	Birmingham—Jefferson
Irwin, R. P.	Moulton—Lawrence	King, C. O.	Birmingham—Jefferson
Irwin, W. H. (S.)	Birmingham—Jefferson	Kinkead, K. J.	Birmingham—Jefferson
Irwin, W. W.	Moulton—Lawrence	Kirby, L. E.	Birmingham—Jefferson
Isbell, A. L.	Albertville—Marshall	Kirk, A. A.	Tuscaloosa—Tuscaloosa
Isbell, E. A.	Gadsden—Etowah	Kirk, A. T.	Gordo, Rt. 2—Pickens
Issos, D. N.	Birmingham—Jefferson	Kirkpatrick, M. B.	Montgomery—Montgomery
Jackson, A. A.	Florence—Lauderdale	Kirkpatrick, S. M. (S.)	Selma—Dallas
Jackson, A. C.	Jasper—Walker	Klein, W. W.	Altoona, Rt. 2—Blount
Jackson, B. F.	Montgomery—Montgomery	Klie, H. B.	Forkland—Greene
Jackson, B. F., Jr. (S.)	Montgomery—Montgomery	Knight, J. H.	Birmingham—Jefferson
Jackson, C. A.	York—Sumter	Kracke, R. R.	Birmingham—Jefferson
Jackson, D. E.	Lester—Limestone	Krout, C. F.	Brent—Bibb
Jackson, H. L.	Birmingham—Jefferson	Kyzer, J. A.	Madison—Madison
Jackson, J. A.	Sulligent—Lamar	Kyzer, J. H.	Andalusia—Covington
Jackson, L. F.	Panola—Sumter	Lafferty, C. R.	Montgomery—Montgomery
Jackson, N. E.	Florence—Lauderdale	Lamar, C. L.	Birmingham—Jefferson

Name	Town and County	Name	Town and County
Lamberth, W. C.	Alexander City—Tallapoosa	Markheim, H. R. (S.)	Cullman—Cullman
Langdon, H. R.	Mulga—Jefferson	Marks, R. H. (S.)	Bethesda, Md.—See Montgomery
Lary, J. H. (S.)	Huntsville—Madison	Marlette, G. C.	New Orleans—See Escambia
Laslie, C. G.	Montgomery—Montgomery	Marrs, T. C.	Montgomery—Montgomery
Latiolais, S. G.	Dothan—Houston	Marsh, J. S.	Collinsville—DeKalb
Laughlin, J. B.	Huntsville—Madison	Marshall, W. L.	Langdale—Chambers
Lavender, B. N.	Albertville—Marshall	Martin, C. T. (S.)	Headland—Henry
Lavender, C. B.	Crossville—DeKalb	Martin, F. J. (S.)	Montgomery—Montgomery
Lawrence, C. O.	Clanton—Chilton	Martin, H. F. (S.)	Birmingham—Jefferson
Lawrence, Toombs	Tuscaloosa—Tuscaloosa	Martin, J. A. (S.)	Montgomery—Montgomery
Lawson, C. L.	Gadsden—Etowah	Martin, J. C.	Cullman—Cullman
Lawson, Nettie B.	Gadsden—Etowah	Martin, J. H.	Selma—Dallas
Leach, C. N.	New York—See Montgomery	Martin, R. A.	Pell City—St. Clair
Leach, J. E.	Gadsden—Etowah	Martin, T. E.	Guntersville—Marshall
Leach, Sydney	Tuscaloosa—Tuscaloosa	Martin, T. M.	Plantersville—Dallas
Leatherwood, E. F.	Hayneville—Lowndes	Martin, W. A.	Birmingham—Jefferson
Ledbetter, S. L. Jr.	Birmingham—Jefferson	Martin, W. B.	Warrior—Jefferson
Lee, A. B.	Lanett—Chambers	Martz, Harry (S.)	Birmingham—Jefferson
Lee, F. J.	Luverne—Crenshaw	Mason, D. A.	Selma—Dallas
Lee, L. T.	Selma—Dallas	Mason, J. M.	Birmingham—Jefferson
Lee, W. E.	Ft. Deposit—Lowndes	Massey, B. J.	Enterprise—Coffee
Leland, Joseph	Birmingham—Jefferson	Mastin, O. C.	Wedowee—Randolph
Lester, B. S.	Birmingham—Jefferson	Matthews, A. D.	Ozark—Dale
Lester, R. P.	Mobile—Mobile	Maxwell, J. A.	Tuscaloosa—Tuscaloosa
Lett, E. R.	Tallassee—Elmore	Maxwell, W. J.	Sheffield—Colbert
Levi, I. P.	Anniston—Calhoun	May, W. L.	Powhatan—Jefferson
Lewis, C. F.	Birmingham—Jefferson	Mayer, K. A.	Lower Peach Tree—Wilcox
Lewis, H. J.	Birmingham—Jefferson	Mayfield, P. B.	Tuscaloosa—Tuscaloosa
Lewis, T. K.	Birmingham—Jefferson	Mayhall, C. V.	Athens—Limestone
Leyden, H. A.	Anniston—Calhoun	Mazyck, Arthur	Dothan—Houston
Lightfoot, P. M.	Shorter—Macon	McAdory, E. D.	Cullman—Cullman
Linder, B. G.	Birmingham—Jefferson	McBurney, Ralph	University—Tuscaloosa
Linder, Hugh M. C.	Birmingham—Jefferson	McCafferty, E. L.	Mt. Vernon—Mobile
Lineberry, E. D.	Birmingham—Jefferson	McCain, W. J.	Livingston—Sumter
Linn, J. E. (S.)	Birmingham—Jefferson	McCall, D. T.	Mobile—Mobile
Lisenby, J. O.	Atmore—Escambia	McCann, R. B.	Seale—Russell
Lister, R. H.	Birmingham—Jefferson	McCarn, O. C., Jr. (S.)	Birmingham—Jefferson
Little, E. G.	Gadsden—Etowah	McCaslan, W. H.	Union Springs—Bullock
Little, J. H. (S.)	Mobile—Mobile	McClure, H. A.	Mayo, Fla.—See Lamar
Littlejohn, W. S. (S.)	Birmingham—Jefferson	McConnico, F. H.	Montgomery—Montgomery
Littlepage, G. F.	Sheffield—Colbert	McCord, Bert	Gadsden—Etowah
Littlepage, T. M.	Butler—Choctaw	McCorkle, F. W.	Gadsden—Etowah
Livingston, J. A.	Birmingham—Jefferson	McCown, W. G. (S.)	Huntsville—Madison
Lloyd, W. K.	Anniston—Calhoun	McCrary, G. C.	Jackson—Clarke
Locke, W. W. (S.)	Birmingham—Jefferson	McCraw, R. T.	Oxford—Calhoun
Long, Clarence	Huntsboro—Russell	McDaniel, Joe Crosby	Birmingham—Jefferson
Long, D. J.	Montgomery—Montgomery	McDaniel, Jos. Columbus	York—Sumter
Long, J. R.	Marion—Perry	McDiarmid, T. S.	Gadsden—Etowah
Long, R. N.	Selma—Dallas	McDonald, C. W.	Union Springs—Bullock
Long, W. H. (S.)	Birmingham—Jefferson	McDonald, Juanita B.	Andalusia—Covington
Long, W. W.	Birmingham—Jefferson	McDowell, J. F. (S.)	Birmingham—Jefferson
Lonnergan, L. R. (S.)	Washington, D. C.—See Etowah	McEachern, C. P.	Geneva—Geneva
Love, J. T.	Birmingham—Jefferson	McElroy, J. M.	Attalla—Etowah
Lovelady, R. G.	Birmingham—Jefferson	McEniry, E. P.	Dolomite—Jefferson
Lovelady, W. H.	Hartselle—Morgan	McEver, E. A. (S.)	Gadsden—Etowah
Lovett, W. J.	Sipsey—Walker	McFatter, T. K.	Dothan—Houston
Lovvorn, R. C.	Newell—Randolph	McGahey, R. G.	Birmingham—Jefferson
Lucas, R. L. (S.)	Birmingham—Jefferson	McGahey, T. P.	Birmingham—Jefferson
Lucius, R. S.	Eutaw—Greene	McGehee, H. T.	Birmingham—Jefferson
Luckie, K. E.	Selma—Dallas	McGehee, W. W.	Montgomery—Montgomery
Lull, Cabot	Birmingham—Jefferson	McGhee, Moses	Daleville—Dale
Lupton, F. A.	Birmingham—Jefferson	McGrath, W. E.	Sheffield—Colbert
Lynch, M. H.	Scottsboro—Jackson	McGraw, F. J. (S.)	Birmingham—Jefferson
		McInnis, W. R.	Clio—Barbour
MacLennan, E. R. (S.)	Opp—Covington	McIntosh, E. L.	Camden—Wilcox
MacQueen, J. W.	Birmingham—Jefferson	McKinnon, H. A.	Birmingham—Jefferson
Maddox, John W.	Ardmore—Limestone	McKissack, W. M.	Huntsville—Madison
Magruder, T. V.	Birmingham—Jefferson	McLain, A. D.	Salem—Lee
Majors, W. B. (S.)	Tuscaloosa—Tuscaloosa	McLaughlin, J. D.	Blue Springs—Barbour
Majure, E. O. (S.)	Wetumpka—Elmore	McLean, C. C.	Birmingham—Jefferson
Malouf, G. M.	Sylacauga—Talladega	McLellan, T. R.	Aliceville—Pickens
Manasco, Hobson (S.)	Carbon Hill—Walker	McLeod, C. D.	Andalusia—Covington
Manley, J. R.	Roanoke—Randolph	McLeod, J. C.	Bay Minette—Baldwin
Maples, J. H.	Athens—Limestone	McLester, J. B. (S.)	Birmingham—Jefferson
Maples, J. M.	Killen, RFD—Lauderdale	McLester, J. S.	Birmingham—Jefferson
Maples, W. E.	Athens—Limestone	McMillan, S. B.	Frisco City—Monroe

Name	Town and County	Name	Town and County
McNabb, J. T. (S.)	Alabama City—Etowah	Neely, M. G.	Fairfield—Jefferson
McNease, B. W.	Fayette—Fayette	Nelson, W. B.	Bay Minette—Baldwin
McQueen, J. P.	Birmingham—Jefferson	Neville, C. W.	Flat Creek—Jefferson
McQuiddy, R. C.	Birmingham—Jefferson	Newburn, G. W.	Prichard—Mobile
McRee, H. C.	Hamilton—Marion	Newdorp, John (S.)	Montgomery—Montgomery
McVay, L. V.	Mobile—Mobile	Newfield, S. U.	Birmingham—Jefferson
Meadows, Burton	Birmingham—Jefferson	Newman, Lucian (S.)	Dadeville—Tallapoosa
Meadows, H. H., Jr. (S.)	Montgomery—Montgomery	Newton, G. E.	Prattville—Autauga
Meadows, J. A.	Birmingham—Jefferson	Newton, G. G.	Evergreen—Conecuh
Meeker, W. R. (S.)	Mobile—Mobile	Nice, C. M.	Birmingham—Jefferson
Mehaffey, J. W.	Birmingham—Jefferson	Nichols, Cobb	Rockville—Clarke
Meharg, S. T.	Anniston—Calhoun	Nicholson, Cooper	Centerville—Bibb
Meharg, W. G.	Anniston—Calhoun	Nicholson, L. B.	Gadsden—Etowah
Meigs, J. H. (S.)	Anniston—Calhoun	Nickerson, Paul	Sylacauga—Talladega
Meigs, S. C.	Centerville—Bibb	Nickson, H. C.	Brantley—Crenshaw
Meneray, W. E.	Gadsden—Etowah	Noble, William (S.)	Attalla—Etowah
Mertins, P. S., Jr. (S.)	Montgomery—Montgomery	Nodine, E. R.	Montgomery—Montgomery
Meyer, B. S.	Birmingham—Jefferson	Noland, Lloyd	Fairfield—Jefferson
Meyer, Jerome	Birmingham—Jefferson	Norman, E. T.	Greensboro—Hale
Miles, N. E. (S.)	Birmingham—Jefferson	Norton, E. M.	Birmingham—Jefferson
Miles, W. C.	Oneonta—Blount	Norton, R. O.	Louisville—Barbour
Miller, D. A. (S.)	Birmingham—Jefferson	Nungester, G. H. (S.)	Decatur—Morgan
Miller, J. A.	Wylam—Jefferson	Nye, G. E.	Scottsboro—Jackson
Miller, R. H.	Haleyville—Winston		
Miller, S. T.	Meridian, Miss.—See Choctaw	O'Connell, Edward	Birmingham—Jefferson
Miller, W. L.	Gadsden—Etowah	Odom, H. G.	Irondale—Jefferson
Milligan, R. L.	Montgomery—Montgomery	O'Gwynn, J. C., Jr. (S.)	Mobile—Mobile
Minor, W. H. (S.)	Mobile—Mobile	Oliver, J. T.	Tuscaloosa—Tuscaloosa
Minot, Dobbs (S.)	Eutaw—Greene	Olivet, C. A.	Haleyville—Winston
Minus, J. A.	Epess—Sumter	Orr, W. L.	Ozark—Dale
Mitchell, H. E.	Birmingham—Jefferson	Orton, A. E.	Bessemer—Jefferson
Mitchell, J. I.	Pell City—St. Clair	Oswalt, G. G.	Mobile—Mobile
Mitchell, S. A.	Rt. 7, Birmingham—Jefferson	Owen, H. R. (S.)	Union Springs—Bullock
Mohr, C. A.	Mobile—Mobile	Owens, A. H.	Ashland—Clay
Monsky, D. B. (S.)	Montgomery—Montgomery	Owens, John Harlan	Ashland—Clay
Montgomery, Arthur H.	Montgomery—Montgomery	Owings, W. J. B.	Brent—Bibb
Montgomery, J. Ethel	Belle Ellen—Bibb	Owsley, L. H.	Eclectic—Elmore
Moody, E. F.	Dothan—Houston	Owsley, W. M.	Eclectic—Elmore
Moody, I. W. (S.)	Mobile—Mobile	Owsley, W. S.	Opelika—Lee
Moody, Maxwell	Tuscaloosa—Tuscaloosa		
Moody, W. E.	Empire—Walker	Palmer, Julian G.	Opelika—Lee
Moore, C. R.	Clanton—Chilton	Parham, J. B.	Ashville—St. Clair
Moore, C. W. C.	Talladega—Talladega	Parker, C. E. R. (S.)	Montgomery—Montgomery
Moore, D. S., Jr.	Birmingham—Jefferson	Parker, D. F. (S.)	Birmingham—See Bullock
Moore, E. G.	Talladega—Elmore	Parker, H. J. (S.)	Chicago—See Madison
Moore, E. M.	Prattville—Autauga	Parker, L. D.	Andalusia—Covington
Moore, J. G.	Birmingham—Jefferson	Parker, L. L.	Andalusia—Covington
Moore, J. H.	Lafayette—Chambers	Parker, P. H. (S.)	Margaret—St. Clair
Moore, L. H.	Orrville—Dallas	Parker, S. R.	Aliceville—Pickens
Moore, W. R.	Florence—Lauderdale	Parnell, C. N.	Maplesville—Chilton
Moore, W. W.	Camden—Wilcox	Parnell, L. C.	Montevallo—Shelby
Moorer, M. L.	Mt. Vernon—Mobile	Parris, Briggs	Geraldine—DeKalb
Moorman, J. D. (S.)	Huntsville—Madison	Parrish, W. A.	Midland City—Dale
Moorman, M. R.	Huntsville—Madison	Parsons, J. L.	Ensley—Jefferson
Morgan, J. O.	Gadsden—Etowah	Parsons, W. C. (S.)	Birmingham—Jefferson
Morgan, J. R.	Birmingham—Jefferson	Partlow, R. C.	Tuscaloosa—Tuscaloosa
Morland, H. C.	Birmingham—Jefferson	Partlow, W. D.	Tuscaloosa—Tuscaloosa
Morris, H. R.	Birmingham—Jefferson	Partridge, C. V. (S.)	Mobile—Mobile
Morrow, R. P.	West Point (Ga.)—See Chambers	Patterson, R. B.	Louisville—Barbour
Morton, Benjamin (S.)	Birmingham—Jefferson	Patton, T. H., Jr. (S.)	Tuscaloosa—Tuscaloosa
Morton, L. E.	Anniston—Calhoun	Patton, W. B. (S.)	Birmingham—Jefferson
Moseley, S. O.	Selma—Dallas	Payne, B. C.	Lewisburg—Jefferson
Motley, J. P. (S.)	Ensley, Birmingham—Jefferson	Payne, E. C.	New Castle—Jefferson
Motley, S. D.	Ensley, Birmingham—Jefferson	Payne, T. J., Jr.	Jasper—Walker
Mount, Bernard	Montgomery—Montgomery	Payne, W. N.	Bessemer—Jefferson
Mulherin, H. G.	Mobile—Mobile	Peacock, L. E.	West Blocton—Bibb
Murphree, C. L.	Birmingham—See Etowah	Peake, J. D.	Mobile—Mobile
Murphree, L. R.	Decatur—Morgan	Peck, Willena	Montevallo—Shelby
Murphy, C. M.	Aliceville—Pickens	Pennington, J. A.	Rt. 2, Birmingham—Jefferson
Murphy, G. E.	Birmingham—Jefferson	Penton, J. R.	Montgomery—Montgomery
Murphy, Iva G. (S.)	Brewton—Escambia	Perdue, J. D.	Mobile—Mobile
Murphy, S. S., Jr.	Mobile—Mobile	Perley, A. I. (S.)	Lafayette—Chambers
Muscat, J. O.	Mobile—Mobile	Perry, A. R. (S.)	Mobile—Mobile
		Perry, E. B. (S.)	Bessemer—Jefferson
Nabers, S. F.	Birmingham—Jefferson	Peterson, E. J. (S.)	Birmingham—Jefferson
Neal, R. D.	Grove Hill—Clarke	Peterson, J. J.	Mobile—Mobile

Name	Town and County	Name	Town and County
Pettus, J. J.	Belle Mina—Limestone	Rowan, W. W.	Attalla—Etowah
Pfeiffer, R. B.	Birmingham—Jefferson	Rowe, G. T.	Hanceville—Cullman
Pierce, W. M.	Tuscumbia—Colbert	Rowe, H. S.	Mt. Vernon—Mobile
Pierson, T. C.	Alden—Jefferson	Rowe, J. F.	Mobile—Mobile
Piper, B. L.	Georgiana—Butler	Rowe, M. C. (S.)	Dothan—Houston
Pitchford, J. D.	Sylacauga—Talladega	Rowe, M. S.	Gadsden—Etowah
Pitt, C. K.	Decatur—Morgan	Rucker, E. W., Jr.	Birmingham—Jefferson
Pitts, E. B. (S.)	Fairfield—Jefferson	Rudder, J. W.	Toxey—Choctaw
Planck, E. H., Jr.	Anniston—Calhoun	Rudolph, C. M.	Birmingham—Jefferson
Pollard, C. T.	Montgomery—Montgomery	Rumpanos, S. N. (S.)	Mobile—Mobile
Poole, W. L.	Birmingham—Jefferson	Russell, C. H.	Huntsville—Madison
Pope, E. C.	Birmingham—Jefferson	Russell, R. O.	Birmingham—Jefferson
Posey, B. F.	Birmingham—Jefferson	Rutherford, C. L.	Mobile—Mobile
Posey, J. F.	Anniston—Calhoun	Ryan, J. M.	Helena—Shelby
Posey, L. C. (S.)	Birmingham—Jefferson		
Pow, J. R.	Woodward—Jefferson	Sacks, H. M.	Troy—Pike
Powell, H. B.	Gadsden—Etowah	Salley, G. W.	Atmore—Escambia
Powell, O. C.	Titus—Elmore	Salter, C. L.	Talladega—Talladega
Powers, A. D.	Athens—Limestone	Salter, P. P.	Eufaula—Barbour
Prather, R. C.	Phoenix City—Russell	Salter, W. M.	Anniston—Calhoun
Prescott, W. E.	Birmingham—Jefferson	Samford, M. W.	Opelika—Lee
Prescott, W. E., Jr.	Birmingham—Jefferson	Samuel, I. J.	Altoona—Etowah
Price, E. S.	Tuscaloosa—Tuscaloosa	Sanders, E. H.	Columbiana—Shelby
Price, L. C. (S.)	Florence—Lauderdale	Sanders, J. G.	Mobile—Mobile
Pruitt, E. P.	Margaret—St. Clair	Sanders, S. R.	Moulton—Lawrence
Pryor, R. B.	Birmingham—Jefferson	Sanders, W. B.	Troy—Pike
Pugh, J. T.	Grove Hill—Clarke	Sandlin, E. G.	Holly Pond—Cullman
		Sankey, H. J.	Nauvoo—Walker
Ralls, A. W.	Gadsden—Etowah	Savage, C. H.	Prichard—Mobile
Ramey, D. R., Jr. (S.)	Hartselle—Morgan	Savage, H. J.	Gadsden—Etowah
Ransom, W. W.	Birmingham—Jefferson	Savage, Victor	Kennedy—Lamar
Rawls, V. Q.	Brewton—Escambia	Scales, J. P.	Livingston—Sumter
Ray, E. A.	Andalusia—Covington	Scales, W. W.	Mobile—Mobile
Ray, E. C.	Ensley, Birmingham—Jefferson	Scarbrough, B. C.	Albertville—Marshall
Rayfield, J. D.	Jacksonville—Calhoun	Schapiro, M. M. (S.)	Ensley—Jefferson
Reagan, Cas	Montgomery—See Jefferson	Schoolar, T. E.	Centerville—Bibb
Reaves, J. U.	Mobile—Mobile	Scofield, T. F.	Birmingham—Jefferson
Redden, R. H.	Sulligent—Lamar	Scott, E. M.	Birmingham—Jefferson
Reid, James	Clayton—Barbour	Scott, E. M., Jr. (S.)	Birmingham—Jefferson
Reid, J. I.	Montevallo—Shelby	Scott, Marvin	Headland—Henry
Reim, N. H.	Tuscaloosa—Tuscaloosa	Scott, W. F.	Birmingham—Jefferson
Rennie, T. L.	Pell City—St. Clair	Scrivner, J. D.	Berry—Fayette
Reynolds, F. D.	Montgomery—Montgomery	Searcy, H. B.	Tuscaloosa—Tuscaloosa
Reynolds, G. C.	Brundidge—Pike	Seay, J. E.	Birmingham—Jefferson
Rhodes, C. E.	Jefferson—Marengo	Segrest, G. O.	Mobile—Mobile
Richey, C. H.	Valley Head—DeKalb	Seibold, J. L.	Birmingham—Jefferson
Riggs, F. W.	Montgomery—Montgomery	Self, G. W.	Trafford—Blount
Rike, H. C.	Birmingham—Jefferson	Sellers, D. F.	Mobile—Mobile
Riley, H. C.	Coffee Springs—Geneva	Sellers, H. G.	Birmingham—Jefferson
Riser, W. H.	Lafayette—Chambers	Sellers, I. J.	Birmingham—Jefferson
Roach, A. N. T.	Mobile—Mobile	Sellers, N. E.	Anniston—Calhoun
Roan, A. M.	Decatur—Morgan	Sellers, W. A.	Montgomery—Montgomery
Robbins, W. J.	Florence—Lauderdale	Sellers, W. D.	Birmingham—Jefferson
Roberson, J. T.	Riverside—St. Clair	Sellers, W. L., Jr.	Mobile—Mobile
Roberts, J. M.	Vernon—Lamar	Sentell, J. H.	New Hope—Madison
Roberts, M. J. (S.)	Mobile—Mobile	Sewell, J. F.	Wetumpka—Elmore
Roberts, S. S.	Florence—Lauderdale	Shaddix, M. L.	Ashland—Clay
Roberts, W. S.	Birmingham—Jefferson	Shamblin, J. L.	Tuscaloosa—Tuscaloosa
Robertson, B. O.	Birmingham—Jefferson	Shamblin, J. R. (S.)	Tuscaloosa—Tuscaloosa
Robertson, J. A.	Fayette—Fayette	Shamblin, R. D. (S.)	Tuscaloosa—Tuscaloosa
Robertson, J. P.	Birmingham—Jefferson	Shamblin, W. G.	Tuscaloosa—Tuscaloosa
Robinson, A. N.	Coffeeville—Clarke	Shanks, R. G.	Autaugaville—Autauga
Robinson, C. B.	Marion—Perry	Shannon, P. W.	Birmingham—Jefferson
Robinson, E. B. (S.)	Fairfield—Jefferson	Shaw, R. E.	Whatley—Clarke
Robinson, H. W.	Edna—Choctaw	Shaw, R. W.	Gilbertown—Choctaw
Rodriguez, J. M. (S.)	Louisville—Barbour	Shelamer, A. M. (S.)	Athens—Limestone
Roe, L. W.	Mobile—Mobile	Shell, J. R. (S.)	Abbeville—Henry
Rogers, H. L.	Albertville—Marshall	Shell, L. P.	Abbeville—Henry
Roscoe, G. J.	Birmingham—Jefferson	Shelton, S. W.	Montgomery—Montgomery
Rosen, H. L. (S.)	Montgomery—Montgomery	Shepherd, R. H.	Jasper—Walker
Ross, C. H.	Mobile—Mobile	Sheppard, J. T. (S.)	Gadsden—Etowah
Rosser, W. J.	Birmingham—Jefferson	Sherer, R. J. (S.)	Jasper—Walker
Rothermel, R. E. (S.)	Montgomery—See Lee	Sherman, Morris	Sylacauga—Talladega
Rountree, W. B.	Thomas Sta., Birmingham—Jefferson	Sherrill, J. D.	Birmingham—Jefferson
Rouse, C. C. (S.)	Mobile—Mobile	Shipp, M. G.	Anniston—Calhoun
		Shirley, J. E.	Tuscaloosa—Tuscaloosa

Name	Town and County	Name	Town and County
Shores, S. S.	Carbon Hill—Walker	Stayer, Glenn	Birmingham—Jefferson
Shropshire, C. W.	Birmingham—Jefferson	Stephens, A. R.	Delta—Clay
Shugerman, H. P.	Birmingham—Jefferson	Stephens, B. A.	Lineville—Clay
Sibley, B. D.	Birmingham—Jefferson	Stephens, D. D.	Slocomb—Geneva
Sigrest, O. R.	Attalla—Etowah	Stephens, S. H.	Mobile—Mobile
Silvey, G. E.	Gadsden—Etowah	Stephens, W. C. (S.)	Mobile—Mobile
Simon, H. E. (S.)	Birmingham—Jefferson	Stevenson, F. C.	Montgomery—Montgomery
Simpson, H. M.	Florence—Lauderdale	Stevenson, W. W.	Roanoke—Randolph
Simpson, John Wesley	Parrish—Walker	Stewart, G. E.	Fayette—Fayette
Simpson, John William	Birmingham—Jefferson	Stewart, J. J. (S.)	Birmingham—Jefferson
Simpson, S. Paul (S.)	Alabama City—Etowah	Stewart, R. C.	Sylacauga—Talladega
Simpson, W. C.	Gadsden—Etowah	Stewart, R. L. (S.)	Bessemer—Jefferson
Sims, A. G., Jr.	Rt. 8, Birmingham—Jefferson	Stewart, R. T.	Acmar—St. Clair
Sims, J. A.	Renfroe—Talladega	Stewart, Vera B.	Birmingham—Jefferson
Sims, Thomas	Fairfield—Jefferson	Stewart, W. P.	Troy—Pike
Siniard, E. C.	Birmingham—Jefferson	Stickley, C. S.	Montgomery—Montgomery
Sizemore, D. M.	Sulligent—Lamar	Stinson, W. E.	Gadsden—See Bibb
Skinner, I. C.	Selma—Dallas	Stitt, Frank	Cullman—Cullman
Skinner, M. M.	Selma—Dallas	Stock, R. P.	Childersburg—Talladega
Skinner, P. B.	Fairhope—Baldwin	Stockton, F. E.	Birmingham—Jefferson
Sledge, E. S.	Mobile—Mobile	Stokes, Alice Hill	Montgomery—Montgomery
Sloan, E. F.	Columbiana—Shelby	Stone, J. J.	Pratt City—Jefferson
Smelo, L. S.	Birmingham—Jefferson	Stone, J. T.	Oneonta—Blount
Smith, C. H.	Birmingham—Jefferson	Stough, W. V.	Montgomery—Montgomery
Smith, C. K.	Greensboro—Hale	Stovall, H. C.	Pinckard—Dale
Smith, D. D. (S.)	Birmingham—Jefferson	Street, T. H.	Alexander City—Tallapoosa
Smith, E. B.	Birmingham—Jefferson	Stringer, M. S.	Florence—Lauderdale
Smith, F. C.	Bessemer—Jefferson	Strock, C. S.	Verbena—Chilton
Smith, G. H.	Ensley, Birmingham—Jefferson	Stuart, W. W.	Selma, Rt. 1—Dallas
Smith, G. R. (S.)	Ozark—Dale	Stubbins, S. G.	Birmingham—Jefferson
Smith, H. R. (S.)	Birmingham—Jefferson	Stuteville, Ethel	Birmingham—Jefferson
Smith, J. C.	Birmingham—Jefferson	Suggs, S. D.	Montgomery—Montgomery
Smith, J. D.	Eutaw—Greene	Summers, W. P.	Toney—Madison
Smith, J. H. (S.)	Selma—Dallas	Sumner, I. C.	Mobile—Mobile
Smith, J. P.	Eutaw—Greene	Sweeney, D. P. B. (S.)	Birmingham—Jefferson
Smith, J. S.	Montgomery—Montgomery		
Smith, M. E. (S.)	Parrish—Walker	Talley, D. F.	Birmingham—Jefferson
Smith, Murray	Tuskegee—Macon	Tankersley, Ernest	Samson—Geneva
Smith, Rayford A.	Monroeville—Monroe	Tankersley, James	Prattville—Autauga
Smith, T. L.	Birmingham—Jefferson	Tankersley, William	Hope Hull—Montgomery
Smith, T. O.	Wilsonville—Shelby	Tarwater, J. S.	Tuscaloosa—Tuscaloosa
Smith, V. D. (S.)	Leeds—Jefferson	Tatum, S. C.	Center—Cherokee
Smith, W. H. Y.	Montgomery—Montgomery	Taylor, C. H.	Bankhead—Walker
Snelling, D. B. (S.)	Eutaw—Greene	Taylor, E. E.	Crichton—Mobile
Snoddy, S. J.	Russellville—Franklin	Taylor, G. M.	Prattville—Autauga
Snow, J. S. (S.)	Birmingham—Jefferson	Taylor, J. L. (S.)	Mobile—Mobile
Snow, J. W., Jr.	Palos—Jefferson	Taylor, Richard V., Jr.	Mobile—Mobile
Snow, W. R.	Jasper—Walker	Taylor, T. F.	Tuskegee—Macon
Somerset, S. M.	Birmingham—Jefferson	Taylor, W. R.	Town Creek—Lawrence
Sorrell, L. E.	Birmingham—Jefferson	Teague, E. B., Jr. (S.)	Talladega—Talladega
Sowell, J. L.	Jasper—Walker	Teasley, G. H. (S.)	Athens—Limestone
Sparks, D. H.	Birmingham—Jefferson	Terhune, S. R. (S.)	Birmingham—Jefferson
Spearman, G. K. (S.)	Anniston—Calhoun	Terrill, E. C.	Mobile—Mobile
Speir, H. P.	Greenville—Butler	Terrill, J. W.	Ensley, Birmingham—Jefferson
Speir, P. V.	Greenville—Butler	Terry, L. L.	Sylacauga—Talladega
Speir, R. C.	Jackson, Miss.—See Wilcox	Thacker, V. J.	Dothan—Houston
Spies, T. D.	Birmingham—Jefferson	Thetford, J. D.	America—Walker
Spira, Victor	Birmingham—Jefferson	Thigpen, C. A.	Montgomery—Montgomery
Spitzberg, R. H. (S.)	Mobile—Mobile	Thigpen, F. M. (S.)	Montgomery—Montgomery
Spratt, R. D.	Livingston—Sumter	Thomas, A. E.	Montgomery—Montgomery
Springer, H. C.	Bessemer—Jefferson	Thomas, B. F. (S.)	Auburn—Lee
Spruell, W. H. (S.)	Russellville—Franklin	Thomas, E. M.	Prattville—Autauga
Spruill, G. E.	Ethelsville—Pickens	Thompson, J. A.	Pine Apple—Wilcox
Stabler, A. A. (S.)	Greenville—Butler	Thompson, W. A.	Citronelle—Mobile
Stabler, A. L.	Birmingham—Jefferson	Thorington, T. C.	Montgomery—Montgomery
Stabler, E. V.	Greenville—Butler	Thrower, B. F.	Enterprise—Coffee
Stabler, L. V.	Greenville—Butler	Thuss, C. J.	Birmingham—Jefferson
Staggers, W. L.	Benton—Lowndes	Thuss, W. G.	Birmingham—Jefferson
Stallings, H. S.	Troy—Pike	Tillman, J. S.	Clio—Barbour
Stallworth, C. J.	Thomaston—Marengo	Timberlake, Landon (S.)	Birmingham—Jefferson
Stallworth, E. L.	Evergreen—Conecuh	Tippins, H. K.	Geneva—Geneva
Stallworth, J. P.	Canoe—Escambia	Tippins, J. R.	Hartford—Geneva
Stallworth, R. W.	Evergreen—Conecuh	Tisdale, W. C.	Mt. Vernon—Mobile
Stallworth, W. A.	Frisco City—Monroe	Toole, A. F.	Talladega—Talladega
Stanley, W. A.	Montgomery—See Coffee	Towns, T. M.	Oneonta—Blount
Stansberry, C. L.	Oneonta—Blount	Townsend, J. M. (S.)	Birmingham—Jefferson

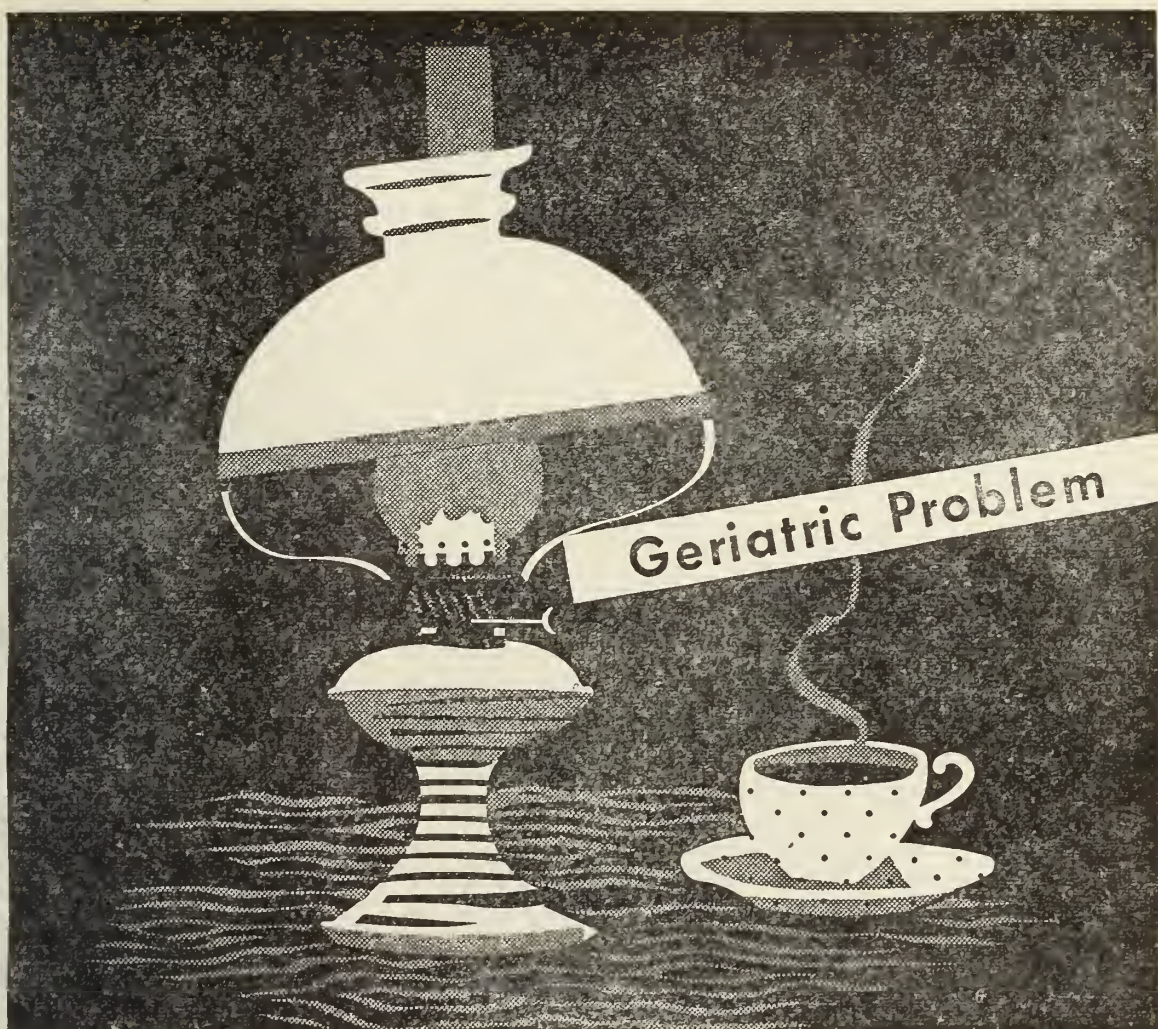
Name	Town and County	Name	Town and County
Trammell, E. L.	Dutton—Jackson	Welch, S. H.	Birmingham—Jefferson
Trapp, W. R.	Tuscumbia—Colbert	Weldon, H. S.	Lanett—Chambers
Treherne, A. J. (S.)	Atmore—Escambia	Weldon, J. M.	Mobile—Mobile
Trice, D. H.	Boligee—Greene	West, O. T.	Fairfield—Jefferson
Trucks, J. F. (S.)	Birmingham—Jefferson	Westcott, W. B.	Montgomery—Montgomery
Trumper, Abraham	Montgomery—Montgomery	Wheeler, N. A.	Lafayette—Chambers
Tucker, E. W.	Fairfield—Jefferson	Wheeler, N. A., Jr. (S.)	Lafayette—Chambers
Tucker, J. S.	Dixiana—See Bibb	Whetstone, A. K.	Sylacauga—Talladega
Turlington, L. F.	Birmingham—Jefferson	Whigham, A. L.	Newville—Henry
Turner, W. H.	Dothan—Houston	Whitaker, J. E.	Huntsville—Madison
Tyler, R. E.	Birmingham—Jefferson	White, A. L.	Thomasville—Clarke
Tyler, R. E. L.	Tuscaloosa—Tuscaloosa	White, A. M.	Hartselle—Morgan
		White, M. S.	Hamilton—Marion
Underwood, A. J.	Spruce Pine—Franklin	White, R. L.	Mt. Andrew—Barbour
Underwood, F. R.	Red Bay—Franklin	White, W. E. (S.)	Anniston—Calhoun
Underwood, N. P.	Russellville—Franklin	White, W. W.	Center—Cherokee
Underwood, O. O.	Phil Campbell—Franklin	Whitehead, F. F.	Neosha, Mo.—See Blount
Underwood, S. S.	Birmingham—Jefferson	Whitehead, V. E.	Blountsville—Blount
Ussery, G. C.	Roanoke—Randolph	Whiteside, H. B.	Ohatchee—Calhoun
Ussery, J. A.	Courtland—Lawrence	Whiteside, J. M.	Anniston—Calhoun
		Whiteside, M. S.	Cullman—Cullman
Vance, J. G.	Birmingham—Jefferson	Whitman, C. R.	Tuscumbia—Colbert
Vandiver, H. G.	Princeton—Jackson	Whitney, O. H.	Carbon Hill—Walker
Van Sant, J. W.	Piedmont—Calhoun	Wiesel, B. H.	Birmingham—Jefferson
Van Sant, T. E.	Piedmont—Calhoun	Wike, J. O.	Madison—Madison
Van Wezel, Norman	Montgomery—Montgomery	Wiley, C. C.	Birmingham—Jefferson
Vaughan, A. E.	Geneva—Geneva	Wilkerson, A. F. (S.)	Marion—Perry
Venning, E. W.	Guntersville—Marshall	Wilkerson, F. W.	Montgomery—Montgomery
		Wilkerson, W. W.	Montgomery—Montgomery
Waddell, J. R.	Rogersville—Lauderdale	Wilkinson, D. L.	Birmingham—Jefferson
Wainwright, S. P. (S.)	Birmingham—Jefferson	Wilkinson, H. B.	Montgomery—Montgomery
Walden, J. D.	Florence—Lauderdale	Wilkinson, J. E. Jr.	Prattville—Autauga
Waldrep, A. C.	Red Bay—Franklin	Wilkinson, J. G.	Cottonwood—Houston
Waldrop, A. M.	Jasper—Walker	Wilks, A. E.	Powderly—Jefferson
Waldrop, R. W.	Bessemer—Jefferson	Williams, G. N.	Linden—Marengo
Walker, A. A.	Birmingham—Jefferson	Williams, H. B. (S.)	Birmingham—Jefferson
Walker, A. M.	Tuscaloosa—Tuscaloosa	Williams, James	Jacksonville—Calhoun
Walker, H. O.	Huntsville—Madison	Williams, J. H.	Fairfield—Jefferson
Walker, H. S. J.	Mobile—Mobile	Williams, J. R.	Selma—Dallas
Walker, J. E.	E. Tallassee—Tallapoosa	Williams, K. B.	Hartford—Geneva
Walker, L. M.	Jasper—Walker	Williams, W. C.	Bridgeport—Jackson
Walker, Moody	Huntsville—Madison	Williams, W. J.	Nigeria, Africa—See Jefferson
Wall, Conrad	Forest Home—Butler	Williamson, Byrn	Birmingham—Jefferson
Wallace, A. D.	Plantersville—Dallas	Williamson, E. O.	Gurley—Madison
Wallace, G. O.	Clayton—Barbour	Williamson, George William	Bessemer—Jefferson
Wallace, S. H.	Birmingham—Jefferson	Willis, C. A.	Montgomery—Montgomery
Walls, J. J.	Alexander City—Talladega	Wilson, C. H. (S.)	New Orleans—See Jefferson
Walton, Mary (S.)	Opelika—Lee	Wilson, Cunningham	Birmingham—Jefferson
Ward, H. S.	Birmingham—Jefferson	Wilson, D. W.	Fyffe, Rt. 2—DeKalb
Ward, W. R.	Birmingham—Jefferson	Wilson, F. C.	Birmingham—Jefferson
Warren, C. M. (S.)	Jackson—Clarke	Wilson, J. D. (S.)	Birmingham—Jefferson
Warren, T. A.	Auburn—Lee	Wilson, J. L.	Hackleburg—Marion
Warren, W. E.	Mentone—See Jefferson	Wilson, J. M.	Mobile—Mobile
Warrick, G. W. (S.)	Birmingham—Jefferson	Wilson, J. W.	Tuscaloosa—Tuscaloosa
Warrick, W. D. (S.)	Birmingham—Jefferson	Wilson, L. E.	Birmingham—Jefferson
Warwick, B. B.	Talladega—Talladega	Wilson, O. E.	Birmingham—Jefferson
Washam, Marvin	Talladega—Talladega	Wilson, R. K.	Montgomery—Montgomery
Waters, H. W.	Opp—Covington	Wilson, W. E. (S.)	Russellville—Franklin
Watkins, H. S.	Coal Valley—Walker	Wimberly, G. B.	Reform—Pickens
Watkins, J. Harold (S.)	Montgomery—Montgomery	Windham, L. A.	Luverne—Crenshaw
Watkins, M. A.	Birmingham—Jefferson	Windham, S. W. (S.)	Geneva—Geneva
Watkins, M. L.	Glenwood—Crenshaw	Winn, L. M. (S.)	Birmingham—Jefferson
Watson, Jerre	Anniston—Calhoun	Winslow, R. C.	Sylacauga—Talladega
Watson, J. A.	Springville—St. Clair	Winters, H. H.	Tuskegee—Macon
Watson, R. H.	Georgiana, RFD—Butler	Wise, I. M.	Mobile—Mobile
Watterston, Charles	Birmingham—Jefferson	Wiygul, C. H.	Fairfield—Jefferson
Watwood, J. A.	Gadsden—Etowah	Wood, A. A. (S.)	Mobile—Mobile
Weatherford, Z. L.	Red Bay—Franklin	Wood, F. R.	Heflin—Cleburne
Weathington, Lee	Guntersville—Marshall	Wood, G. L.	Andalusia—Covington
Weaver, F. C.	Anniston—Calhoun	Wood, J. W.	Hanceville—Cullman
Webb, Virginia E.	Mobile—Mobile	Wood, W. G. (S.)	Camp Hill—Tallapoosa
Weidner, G. L.	Elba—Coffee	Woodall, P. S. (S.)	Birmingham—Jefferson
Weil, C. K. (S.)	Montgomery—Montgomery	Woodley, L. S. (S.)	Andalusia—Covington
Weiner, Harry (S.)	Birmingham—Jefferson	Woodruff, G. G. (S.)	Anniston—Calhoun
Weissinger, W. T.	Eutaw—Greene	Woods, A. W. (S.)	Birmingham—Jefferson
Welch, O. W. (S.)	Huntsville—See Jefferson	Woods, T. B. (S.)	Dothan—Houston

Name	Town and County	Name	Town and County
Woodson, L. G., Jr.	Birmingham—Jefferson	Wright, R. D.	Leighton—Colbert
Woodson, R. C.	Birmingham—Jefferson	Wright, S. W.	Bessemer—Jefferson
Woolf, J. H.	Piedmont—Calhoun		
Word, S. B. (S.)	Birmingham—Jefferson	Yancey, G. C.	Tuskegee—Macon
Wren, E. B.	Talladega—Talladega	Yarbrough, C. S.	Auburn—Lee
Wrenn, W. J.	Sumterville—Sumter	Yarbrough, J. F.	Montgomery—See Houston
Wright, D. H.	Berry—Fayette	Yelton, C. L.	Ensley, Birmingham—Jefferson
Wright, D. O. (S.)	Ft. Payne—DeKalb	Young, A. C. (S.)	Bessemer—Jefferson
Wright, L. R.	Heflin—Clebunne	Young, Ferrin	Floral—Covington
Wright, R. A.	Mobile—Mobile	Zieman, A. H. (S.)	Mobile—Mobile
		Zimmerman, A. S.	Mobile—See Jackson

INDEX OF NON-MEMBERS 1945

Name	Town and County	Name	Town and County
Adair, R. T.	Montgomery—Montgomery	Dinkins, Pauline	Selma—Dallas
Adams, J. T.	Mobile—Mobile	Doehring, E. T.	Mobile—Mobile
Allen, A. R.	Ft. Mitchell, RFD—Russell	Donehoo, J. H.	Abernant—Tuscaloosa
Armendola, A. A.	Mobile—Mobile	Dowdy, R. W.	Opp, Rt. 3—Covington
		Dozier, Byron	Birmingham—Jefferson
Ballard, A. E.	Warrior—Jefferson	Drake, W. L.	Fairfield—Jefferson
Ballard, E. H.	Birmingham—Jefferson	Dwiggins, H. G.	Tuskegee—Macon
Barnes, R. H.	Winfield—Marion		
Baugh, W. P.	Decatur—Morgan	Elliott, T. C. (S.)	Butler—Choctaw
Beard, R. S.	Huntsville—Madison	Espy, Curtis	Midland City—Dale
Belcher, W. R.	Birmingham—Jefferson		
Bell, J. E.	Trafford, Rt. 1—Blount	Farrior, L. B.	Mobile—Mobile
Bell, W. H.	Dozier—Crenshaw	Fennell, R. F.	Guntersville—Marshall
Belue, J. C.	Rogersville—Lauderdale	Fields, A. C.	Ensley—Jefferson
Berry, J. C.	Trussville—Jefferson	Fields, E. T.	Ensley—Jefferson
Black, J. B.	Vernon—Lamar	Fleming, J. C.	Hartford—Geneva
Black, J. H.	Montgomery—Montgomery	Flippo, L. N.	Mobile—Mobile
Blanton, Frank	Saragossa—Walker	Floyd, Ashby	Phoenix City—Russell
Bogle, J. H.	Collinsville—DeKalb	Franklin, J. A.	Mobile—Mobile
Booth, W. M.	Hartselle—Morgan	Frederick, R. H.	Phil Campbell—Franklin
Boswell, F. A.	Elmore—Elmore	Fussell, J. A.	New Brockton—Coffee
Boyd, A. F.	Emelle—Sumter		
Boyd, L. M.	Waugh—Montgomery	Garrett, J. D.	Midland City—Dale
Bradford, F. D.	Birmingham—Jefferson	Gessler, I. W. (S.)	Chickasaw—Mobile
Breeland, E. E.	Section—Jackson	Gibbs, J. A.	Gainesville—Sumter
Brewer, H. H.	Birmingham—Jefferson	Giscombe, C. S.	Avondale—Jefferson
Brice, J. A.	Tarrant—Jefferson	Gomez, C. J.	Union Springs—Bullock
Brooks, A. O.	Lincoln, Rt. 1—Talladega	Goode, E. B.	Mobile—Mobile
Brooks, R. L.	Phoenix City, Rt. 2—Russell	Graf, C. C.	Steppville—Cullman
Brothers, W. H.	Talladega—Talladega	Grambling, J. W.	Center—Cherokee
Broughton, N. J.	Birmingham—Jefferson	Gramling, A. B.	Attalla—Etowah
Brown, L. L.	Mobile—Mobile	Green, A. C.	Birmingham—Jefferson
Brown, W. L.	Birmingham—Jefferson	Grosfeld, W. J.	Decatur—Morgan
Bryant, H. C.	Birmingham—Jefferson	Gumbs, O. S.	Huntsville—Madison
Burwell, E. S.	Birmingham—Jefferson		
Busby, E. D.	Parrish, Rt. 1—Walker	Haggard, D. C.	Sylvania—DeKalb
		Hagler, P. L.	Birmingham—Jefferson
Calhoun, S. J.	Langdale—Chambers	Hale, Prior	Vinemont, Rt. 2—Cullman
Cameron, R. A.	Fairfield—Jefferson	Ham, N. M.	Opp—Covington
Campbell, V. O.	Billingsley—Autauga	Hancock, M. W.	Powhatan—Jefferson
Cashin, N. E.	Decatur—Morgan	Hankins, J. M.	Birmingham—Jefferson
Chenault, J. W.	Tuskegee Institute—Macon	Hanna, H. P.	Birmingham—Jefferson
Cherry, S. O.	Huntsville—Madison	Haralson, T. H.	Cusseta—Chambers
Clayton, A. L.	Fyffe—DeKalb	Harper, H. Y.	Oak Hill—Wilcox
Clements, M. D.	Birmingham—Jefferson	Harris, S. F.	Birmingham—Jefferson
Cochran, W. W.	Brilliant—Marion	Hausman, C. P.	Coaling—Tuscaloosa
Coffey, G. W.	Gadsden—Etowah	Hayes, Charles	Fyffe—DeKalb
Coleman, H. N.	Ft. Deposit—Lowndes	Head, W. H.	Cullman—Cullman
Collins, F. A.	Beaverton—Lamar	Henderson, T. B., Jr.	Mobile—Mobile
Cotton, S. F.	Lexington—Lauderdale	Hendrix, C. V.	Oneonta—Blount
Cowles, W. L.	Shawmut—Chambers	Hicks, L. J.	Florence—Lauderdale
		Hood, Alexander	Birmingham—Jefferson
Dahlberg, Leora P.	Fairhope—Baldwin	Huey, B. M.	Ensley, Birmingham—Jefferson
Dale, H. L.	Birmingham—Jefferson	Hunt, J. E.	Anniston—Calhoun
Darden, J. W.	Opelika—Lee	Hutchinson, J. E.	Birmingham—Jefferson
Dasher, J. M.	Dothan—Houston		
Davidson, J. W.	Troy—Pike	Innis, S. B.	Mobile—Mobile
Dawkins, J. T.	Ensley—Jefferson		
Demby, L. S.	Bessemer—Jefferson	Jackson, F. D.	Anniston—Calhoun
Denny, T. H.	Wadley—Randolph	Jeter, M. L.	Sylacauga—Talladega
Dibble, E. H.	Tuskegee—Macon	Johantgen, J. F.	Talladega—Talladega

Name	Town and County	Name	Town and County
Johns, S. W.	Goodwater—Coosa	Pohl, W. F.	Sylacauga—Talladega
Johnson, R. E.	Birmingham—Jefferson	Porter, D. W.	Birmingham—Jefferson
Jones, E. H.	Talladega—Talladega	Pruett, D. P.	Newton—Dale
Jones, H. T.	Lanett—Chambers		
Jones, J. F.	Cuba—Sumter	Ragsdale, M. C.	Bessemer—Jefferson
Jones, T. W.	Loxley—Baldwin	Rankin, H. P.	Montgomery—Montgomery
Jones, W. A.	Sylacauga—Talladega	Reneke, E. J.	Mobile—Mobile
Jordan, D. C.	Guntersville—Marshall	Reynolds, F. K.	Birmingham—Jefferson
		Robertson, J. K.	Ensley, Birmingham—Jefferson
Kebe, G. B.	Phoenix City—Russell	Rodgers, G. A.	Anniston—Calhoun
Kelly, J. P.	Talladega—Talladega	Ross, F. F.	Montgomery—Montgomery
Killgore, J. J.	Wadley—Clay	Rousseau, W. R.	Rogersville—Lauderdale
Kincaid, J. L.	Bessemer—Jefferson	Ruffin, W. L.	Sheffield—Colbert
Kirklin, M. A.	Spring Hill—Mobile	Ryalls, W. M.	Ashford—Houston
Knighton, T. A.	York—Sumter		
		Schmitz-Dumont, Isabella M.	Selma—Dallas
Lane, L. T.	Prichard—Mobile	Scott, Walter	Headland—Henry
Lanford, W. B.	Columbia—Houston	Shepherd, S. T.	Birmingham—Jefferson
Lange, C. E. F.	Chickasaw—Mobile	Sherard, W. H.	Decatur—Morgan
Lee, E. F.	Gastonburg, Rt. 1—Marengo	Sherman, C. R.	Chickasaw—Mobile
Legare, J. K.	Forkland—Greene	Shipp, L. G.	Anniston—Calhoun
Lilly, R. E.	Johns—Jefferson	Simpson, F. S.	Ensley, Birmingham—Jefferson
Lindsey, E. A.	Opelika—Lee	Smothers, R. E. L.	Northport—Tuscaloosa
Long, Henry	Florence—Lauderdale	Snoddy, E. A.	Aliceville—Pickens
Long, T. F.	Montgomery—Montgomery	Spottswood, D. J.	Mobile—Mobile
		Stacey, A. G.	Evergreen, Rt. 1—Monroe
Maclin, R. B.	Birmingham—Jefferson	Stanley, R. H.	Foley—Baldwin
Manasco, Titus	Carbon Hill—Walker	Stephens, J. H.	Birmingham—Jefferson
Marshall, W. S.	Mobile—Mobile	Stevens, T. A.	Mobile—Mobile
Mason, F. H.	Brewton—Escambia	Stewart, J. W.	Gadsden—Etowah
Matthews, H. O.	Bessemer—Jefferson	Stokes, E. M.	Montgomery—Montgomery
May, F. H.	Birmingham—Jefferson	Stoner, W. P.	Bessemer, Rt. 1—Jefferson
Mayfield, S. F.	Tuscaloosa—Tuscaloosa	Strickland, M. M.	Selma, RFD—Dallas
McCall, M. G.	Birmingham—Jefferson	Stutts, H. L.	St. Joseph, Tenn., Rt. 1—S●● Lauderdale
McCarn, D. W. (S.)	Warrior—Jefferson	Swan, L. F.	Birmingham—Jefferson
McCay, T. C.	Pinson—Jefferson	Swann, J. C.	Wedowee—Randolph
McClure, Herbert Cecil	Mobile—Mobile		
McClurkin, W. N.	McWilliams, Rt. 1—Wilcox	Tapia, M. H.	Bayou La Batre—Mobile
McCoo, T. V.	Eufaula—Barbour	Taylor, J. F.	Mobile—Mobile
McCrary, D. W.	Town Creek—Lawrence	Taylor, J. W.	Lexington—Lauderdale
McCullar, J. A.	Russellville—Franklin	Teaford, B. J.	Fairhope—Baldwin
McKenzie, A. B.	Tuscaloosa—Tuscaloosa	Thetford, S. L.	Boligee—Greene
McKinley, C. F.	Atmore—Escambia	Thompson, Charleton	Tuskegee—Macon
McLean, J. N.	Snowdown—Montgomery	Tippin, P. H. M.	Brewton—Escambia
McPherson, C. A. J.	Birmingham—Jefferson	Todd, R. W.	Phoenix City—Russell
Meeks, A. A.	Foley—Baldwin	Towns, J. B.	Gadsden—Etowah
Meharg, R. L.	Alexandria—Calhoun	Townsend, A. L.	Hartford—Geneva
Merritt, T. E.	Flattop—Jefferson	Trammell, Virgil	Rt. 6, Birmingham—Jefferson
Miller, I. S.	Mobile—Mobile		
Milner, S. R.	Eclectic, Rt. 1—Elmore	Ussery, C. J.	Ensley, Birmingham—Jefferson
Mitchell, A. S.	Birmingham—Jefferson		
Mitchell, G. J.	Mobile—Mobile	Van De Voort, Horace	Bessemer—Jefferson
Moore, G. A.	Eutaw—Greene	Van Iderstine, R.	Daphne—Baldwin
Moore, J. C.	Mobile—Mobile	Vann, P. D.	Anniston—Calhoun
Moten, P. S.	Birmingham—Jefferson	Vinson, N. H.	Falkville—Morgan
Muscat, V. P.	Mobile—Mobile		
		Walker, N. D.	Selma—Dallas
Newman, J. H.	Birmingham—Jefferson	Walwyn, C. A.	Tuskegee Institute—Macon
Newman, L. D.	Bay Minette—Baldwin	Washington, Wm.	Montgomery—Montgomery
Noel, W. E.	Boaz—Marshall	Watson, W. A.	Birmingham, Rt. 7—Jefferson
Nutter, R. A.	Demopolis—Marengo	Webster, H. N., Jr.	Mobile—Mobile
		Weldon, R. L.	Lanett—Chambers
Oden, G. E.	Mobile—Mobile	White, C. P.	Labuco—Jefferson
Overton, J. W.	Mobile—Mobile	White, Meredith	Mobile—Mobile
Owen, H. G.	Rt. 2, Quinton—Walker	Whorton, W. W.	Pratt City—Jefferson
Owings, T. L.	Childersburg—Talladega	Wilborn, Don	Montgomery—Montgomery
		Wiley, J. B.	Decatur—Morgan
Palmer, C. R.	Sheffield—Colbert	Wilkerson, G. H.	Mobile—Mobile
Park, M. O.	Crichton—Mobile	Wilkerson, L. B.	Shorter—Macon
Patterson, R. R.	Birmingham—Jefferson	Williams, G. H.	Mobile—Mobile
Patton, M. K.	Selma—Dallas	Williams, J. W.	Tuskegee—Macon
Paull, B. P.	Fairfield—Jefferson	Winn, J. T.	Baileytown—Cullman
Payne, T. H.	Birmingham—Jefferson	Woodall, P. H.	Birmingham—Jefferson
Peavy, J. F., Jr.	Atmore—Escambia	Wynn, A. L.	Montgomery—Montgomery
Peters, R. H.	Mobile—Mobile		
Pettus, W. D.	Montgomery—Montgomery	Young, J. D.	Fayette—Fayette
Peyton, W. H.	Athens—Limestone	Young, T. H.	Birmingham—Jefferson
Plump, A. W.	Birmingham—Jefferson		



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Miscellany

PENICILLIN PRODUCES BEST RESULTS IN TREATMENT OF "TRENCH MOUTH"

Penicillin is playing an effective role today in the treatment of Vincent's angina or "trench mouth," according to studies reported in the July 7 issue of The Journal of the American Medical Association.

One physician, Capt. Bernard M. Schwartz, of the Army Air Forces Regional Hospital, Truax Field, Madison, Wis., said, after making a study on 14 patients, that penicillin is "definitely superior" to the previous agents used in treatment.

"The rapidity with which penicillin acts," he said, "should be of value in reducing the loss of man hours in military and civilian life, in decreasing contagiousness and in reducing the period of discomfort for the patient."

The disease, which is caused by a peculiar spiral organism, was given the name "trench mouth" during the first World War because it spread so widely among the soldiers. Symptoms include pain on swallowing, enlargement of the glands, and a yellowish gray membrane in the mouth and throat.

Following his study, Capt. Schwartz recommended a dosage of 100,000 units of penicillin injected into muscular tissue in 20,000 unit doses every three hours. Smaller or larger doses may be required depending on the severity of the condition.

"The result in each case treated was satisfactory," Capt. Schwartz said. "In every instance subjective discomfort was decidedly alleviated in 24 hours and completely eliminated in 48 hours. There was definite improvement within four to six hours."

Similar results were reported in another study by three physicians—Maj. Paul L. Shallenberger, Lt. Col. Earl R. Denny and Maj. Harold D. Pyle, all of the Medical Corps, Army of the United States.

They used penicillin in a well-planned study on several different groups of patients admitted to the communicable disease section of the Gardiner General Hospital in Chicago.

In their conclusions, reported in the same issue of The Journal, the doctors state:

"The present clinical study demonstrates that penicillin is a remarkably effective agent in the treatment of Vincent's infection. A favorable response was obtained in all cases treated locally."

From the medicine man of old to the modern clinic is a long way. Again and again mystery after mystery has been probed; again and again the utterly impossible has won acceptance against ancient truth; again and again the reach of medicine has been enlarged. The doctor's craft, with triumph after triumph to its credit, is still on its way. Yet it is set within a larger problem of human well-being which up to now has hardly been explored. It will not be solved until we learn to make culture in all its color and drama an instrument of health.—Wendell Berge, Assistant Attorney General of the U. S., Pub. Health Rep., Jan. 1945.

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BACKGROUND

OVER THREE DECADES OF CLINICAL EXPERIENCE

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THE USE OF ALUMINUM IN SILICOSIS CONTROL

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And

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The etiology of silicosis having been established for many years as due to inhalation of free silica (SiO_2), measures of prevention have chiefly been of engineering nature in order to reduce atmospheric silica dust concentrations in industry below the level of five million particles per cubic foot of air. Standard protective practice also includes repeated observation by chest x-ray, at least on an annual basis, of those workers exposed to potentially harmful concentrations of this dust. In 1937 the inhalation of pulverized metallic aluminum was reported to prevent silicosis in experimental animals by Denny, Robson and Irwin,^{1,2} and since that time the work has further expanded. Currently, aluminum is being introduced on an industry-wide basis as an auxiliary means for control of the silicosis hazard. As a corollary, the originators of aluminum prophylaxis have treated individuals disabled by silicosis and have obtained excellent clinical results.

The pathology of silicosis has been described by several investigators, notably

Gardner,^{3,4} but, while the tissue response is fairly constant, the symptomatology associated with the characteristic roentgenologic findings have been rather uncertain. Individuals with far advanced roentgenologic changes may show no symptomatology while others with relatively minor changes by x-ray may be severely disabled. Functional tests for pulmonary disability are uncertain of interpretation due to the wide variation in the normal, and for that reason the disability produced by silicosis has been almost entirely a subjective phenomenon with few objective signs.⁵ The use of aluminum as a therapeutic agent has apparently remarkably improved a number of silicotic individuals. This finding tends to corroborate the usefulness of aluminum as a specific agent against silicosis. Up to the present, inhaled aluminum is the only medication known to give significant relief from the symptoms of silicosis.

It is considered worth while at this time to review and analyze the use of aluminum in the control of silicosis as its application in

This article is appearing also in *Industrial Medicine*

1. Denny, J. J.; Robson, W. D., and Irwin, D. A.: Prevention of Silicosis by Metallic Aluminum; Preliminary Report, *Canad. M. A. J.* 37:1-11 (July) '37.

2. Denny, J. J.; Robson, W. D., and Irwin, D. A.: Prevention of Silicosis by Metallic Aluminum, *Canad. M. A. J.* 40:213-228 (March) '34.

3. Gardner, L. U.: Silicosis and Related Conditions, *J. Indust. Hyg. and Toxicol.* 19:111-125 (March) '37.

4. Gardner, L. U.: Pneumoconioses, *M. Clin. North America* 25:1239-1260 (July) '42.

5. Wright, G. W.: Medical Aspects of Compensation for Partial Disability from Silicosis, Tr., Legal Section, Ninth Annual Meeting, Industrial Hygiene Foundation of America, Inc., New York, 1944.

industry is rapidly becoming widespread. The data contained in this paper were gathered by personal interview and observations at various centers in the United States where aluminum is in use as either a prophylactic or therapeutic agent, or both.

PRINCIPLES

It has been established by animal experimentation for both finely divided metallic aluminum and amorphous hydrated alumina that—

(1) If aluminum* and quartz (silica) localize in the same cell the effect of the quartz is neutralized.

(2) Further progression of silicotic pathology (tissue reaction) is arrested by this phenomenon.

(3) Mature silicotic lesions (nodules) become static and immature lesions (inflammatory and early fibrous changes) are resolved.

(4) The presence of aluminum does not alter the distribution of quartz in the tissues.

(5) The effect of aluminum after inhalation is prolonged (a single large dose may remain in the tissues for over a year).

(6) The presence of aluminum in the tissues produces no toxic effects in healthy animals with this one possible exception—that experimentally it has been shown that hydrated alumina in large doses may alter the body defenses against tuberculosis.

Aluminum and its compounds are not toxic substances and may safely be used in humans. Allergy to the metal may occur occasionally in an idiosyncratic individual.⁶ The Canadian investigators using metallic aluminum have seen no untoward effects in any of their animal or human experiments. Crombie⁷ exposed silicotics with pulmonary tuberculosis to the same kind and doses of metallic aluminum as used in uncomplicated silicosis without producing any change in the tuberculosis. Gardner using hydrated alumina in animals found that small doses adequate to protect against silicosis did not seem to increase the susceptibility to infection. However, when animals were injected with large doses of the compound, progres-

sion of new tuberculosis infections occurred.⁸ These doses of hydrated alumina were so massive as to produce atrophy of the spleen and its untoward effect may have been due to overloading of the phagocytic mechanisms of the body. It would seem wise in view of this finding to exercise care in selecting cases for use with aluminum treatment or prophylaxis since as yet there is not enough clinical data to refute this experimental evidence of possible harm.

The original Canadian investigators used metallic aluminum as the antidotal agent against silica dust. Gardner, in his experiments, found that amorphous hydrated alumina was also successful in neutralizing quartz. Only one of these hydrated aluminas, XH-1010, at present produced by the Aluminum Company of America for experimental purposes only, has proven to be effective. Gardner prefers the use of this material pointing out that—

(1) It is probably the substance ultimately produced as the inhibitory agent.

(2) It is stable and hence simpler to use than freshly ground aluminum which requires a continuously operating ball mill.

(3) It is easier to disperse in the air for dusting groups.

(4) It has less tendency to flocculate on contact with moisture and body fluids.

(5) Its white color makes it less objectionable than the black metallic aluminum.

In view of the long experience of the Canadian groups with metallic aluminum, they insist on its use. They state that the metallic aluminum is a better substance to use than amorphous hydrated alumina as it has proven its value in animal and human experiments. Metallic aluminum powder consists of a nucleus of metal surrounded by an oxide. The metallic content varies from twenty to thirty-three percent, the remainder being oxide. In the body this oxide hydrates to an active complex hydrated alumina which coats the silica particle. The metal further oxidizes and then hydrates to become a complex hydrated alumina. For every unit of metal there are 2.7 units of the hydrated alumina produced. In other words, the metal acts as a reservoir for the

*Unless otherwise stated refers to both freshly ground metallic aluminum and amorphous hydrated alumina.

6. Cotter, L. H.: Case of Bronchial Asthma, *J. Indust. Hyg. and Toxicol.* 26:7, 1944.

7. Personal communication.

8. Gardner, L. U.; Dworski, M., and Delahant, A. B.: Aluminum Therapy in Silicosis; Experimental Study, *J. Indust. Hyg. and Toxicol.* 26:211-223 (Sept.) '44.

inhibitory agent. Furthermore, it is felt that the tendency to flocculate has no importance when the material is inhaled and that such small amounts are used that the black color of the finely ground aluminum is not an objectionable feature. Both compounds have been shown to be equally effective by Bamberger⁹ who treated two groups of silicotics with each of the agents. It would appear, therefore, that the choice of either agent is chiefly a matter of personal preference. It should be mentioned that at this time only metallic aluminum is available for therapy and prophylaxis under licensing arrangements.

THERAPY

Since animal experimentation has proved that aluminum is effective in preventing silicosis, corroborative evidence has been accumulating in that silicotics with disability have improved with aluminum therapy. The most recent tabulated data are found in a paper by Hannon who reports that, out of 143 workmen with positive x-ray and disability, 135 were improved, and that 93 out of 104 workers with positive x-ray but denying disability also improved.¹⁰ These findings have been substantiated by several other investigators who treated silicotics who developed the disease while employed in the ceramic industry and in foundries. Gardner, treating a small group of iron ore miners with silicosis, did not obtain the dramatic improvement reported by others but does report that a number showed subjective improvement. There is still controversy regarding objective evidence of this improvement. Pulmonary function tests are difficult to interpret and those clinicians using the rigid criteria of objective findings find improvement less remarkable.

Hannon^{11, 12} feels that aluminum is effective in relieving the bronchospasm which he believes is responsible for much of the pulmonary dysfunction in silicosis. He also believes that most silicotics, even without emphysema or tuberculosis, have disability and that death from silicosis may occur with-

out cardiac or tuberculous involvement. He states that physiologic tests, especially of pulmonary ventilation, corroborate these findings. The individuals considered least suitable for treatment were the ones with advanced emphysema or tuberculosis. From the pathological standpoint Hannon believes, as does Irwin, that the dyspnea of silicosis is due to thickening of alveolar walls interfering with gaseous exchange and that aluminum causes recession of these findings and improved respiratory interchange. However, no regressive changes have been demonstrated by x-ray and as yet only one autopsy has been obtained on a worker who was insufficiently treated with aluminum and whose pathological findings were inconclusive.

Another advantage of using aluminum in an industry with a silicosis hazard is that it apparently improves the relations between labor and management. Workers who suspect that they may have silicosis often refuse to be x-rayed since discovery of the condition may lead to dismissal or transfer from the job for which they are best fitted. This is especially true where engineering control of the dust is delayed or inadequate. By treating such an individual with aluminum the worker may continue on his job in a potentially hazardous silica environment without danger to himself. Hence, by removing this fear of transfer or dismissal, an aluminum program alleviates one of the critical points of difference between labor and management in relation to industrial health. In addition, the introduction of an aluminum program makes the desirability of preplacement and periodic physical and x-ray examinations more reasonable to the working force. Such programs have numerous other benefits both to labor and to management.

The therapeutic use of aluminum is worthy of extensive clinical application. Analysis of Hannon's cases leaves no doubt that most disabled silicotics, at least in the ceramic and foundry industries, are improved in that they have less dyspnea, decreased cough and decreased chest pain. This is confirmed by the experiences of a number of plant physicians.

PROPHYLAXIS

At the present time all data on the efficacy of aluminum as a preventive measure have

9. Bamberger, P. J.: Aluminum Therapy in Silicosis, *Indust. Med.* 14: 477-479, 1942.

10. Hannon, J. W. G.: Aluminum Therapy in the United States, Tr., *Canad. Inst., Mining and Metallurgy* 47: 180-184, 1944.

11. Personal communication.

12. Personal communication.

been on the basis of animal experimentation. The evidence, however, is so consistent that there is every reason to believe that it will be efficacious in humans also. To determine its efficacy in humans, however, will require a number of years since silicosis does not appear, on the average, until ten years of exposure to harmful concentrations of silica dust. In many parts of the world workmen are being treated prophylactically and it was stated that in five different plants, where engineering control was impossible, workers are being treated prophylactically while still being exposed to concentrations of silica known to produce the disease in relatively short periods of time. In a few years when these data are available the use of aluminum as a preventive measure may be more urgently recommended.

The use of engineering methods is the recommended measure of silicosis prevention since dust control has the additional advantages of —

(1) Providing a cleaner work place and thereby increasing efficiency and morale.

(2) Removing from the worker's mind the psychologic effect of being constantly exposed to a health hazard.

(3) Diminishing the burden of the protective mechanisms of the lungs in handling extraneous inhaled material.

(4) Reducing the possibility of legal action arising as the result of exposure to dust.

McIntyre Research Limited, the United States organization created to license the use of aluminum as a therapeutic and prophylactic agent, insists on dust control measures as do all other industrial hygienists.

DISCUSSION

There are some differences of opinion among industrial hygienists as to the proper use of aluminum as a therapeutic and prophylactic agent. Our observations and experience have lead us to the formulation of a number of indications for the use of this agent. This program could be very readily fitted into the basic procedures used in the control of a silicosis hazard. These practices usually consist of three phases:

(1) Analysis of environmental dust exposure, including such factors as atmospheric concentrations, size of particles, and type of dust.

(2) Engineering methods designed to reduce dustiness below a concentration of five

million particles of pure silica per cubic foot of air.

(3) Medical study, by history, physical examination, and x-ray of exposed workers by means of preplacement and periodic examinations.

Certain workers should be selected for further protection by aluminum using the following criteria:

A. Aluminum should be used therapeutically:

(1) In those individuals who are diagnosed as suffering from silicosis and who are still exposed to some silica dust. It would also be advisable to treat all silicotics who have been exposed to silica in the last ten years in order to arrest possible progression.

(2) In those individuals who have silicosis with disability and who have no evidence of other pulmonary diseases, especially tuberculosis. Under very rigid conditions of observations and control, silicotics with apparent inactive tuberculosis may be treated.

(3) In those workers who show silicotic changes in environments where their fellow workers do not show any evidence of the disease. These individuals apparently have a precocious tendency and for them treatment may be advisable. Frequently these workers are diagnosed as presilicotics on the basis of increased linear markings in the chest x-ray without definite evidence of nodulation.

B. Aluminum should be used prophylactically:

In those workers exposed to a hazardous silica environment where engineering control is impossible or impractical at the time. To evaluate fully the protective action of aluminum, preplacement examination and periodic examinations, coupled with a careful history, physical examination, and physiological test for pulmonary function, should be used.

C. Contraindications:

Individuals with evidence of active tuberculosis should not be treated nor should workers with other pulmonary ailments or far advanced cardiac diseases.

D. Factors necessary for a proper prophylaxis:

(1) The use of aluminum should be in charge of a qualified physician.

(2) Initial and periodic x-ray and physical examinations should be made to determine the need for treatment, response under treatment, and progression or regression of the disease.

(3) The environment should be controlled by engineering methods to prevent excessive exposure to silica dust.

CONCLUSIONS

(1) The widespread use of aluminum as a therapeutic agent should be encouraged if

strictly controlled by means of medical observations.

(2) Aluminum therapy should also be used in a limited number of silicotics without disability, such as those still or recently exposed to silica dust and individuals with a precocious susceptibility to the disease.

(3) As a prophylactic agent aluminum should be considered only as an adjuvant to engineering control.

ERYTHROBLASTOSIS FETALIS; OR HEMOLYTIC DISEASE OF THE NEWBORN

(DUE TO RH INCOMPATIBILITY)

M. VAUN ADAMS, A. B., M. A., M. D., F. A. A. P.
Mobile, Alabama

INTRODUCTION

The care of the potentially erythroblastotic infant and the mother is primarily the responsibility of the physician practicing obstetrics. Pediatric consultation is considered desirable if it is available. This paper correlates and interprets the important phases involved in the theory, diagnosis and treatment of the disease complex called erythroblastosis.

Routine evaluation of the Rh factor is now practiced in some clinics and soon such a study will probably be universally adopted early in pregnancy. The Rh negative mother (who has an Rh positive husband) should be regarded as a distinct liability and the dangers to the mother and infant are not to be minimized. The transfusion of blood in pregnancy (or in one who has been pregnant), without knowing the Rh factor, is gambling with the possibility of a serious, perhaps fatal, reaction.

INCIDENCE

The incidence of the disease is not yet established. The literature presents variable estimates, the incidence being higher in the clinics where the disease is under study. The best evidence reports the incidence to be 1 in 200 to 400 deliveries. It is possible that this would be higher if stillborn infants were routinely examined pathologically. Erythroblastosis probably accounts for about five percent of the total infant mortality.

DEFINITION

Erythroblastosis has been used to describe a condition which occurs late in fetal life (or early in the neonatal period) in which there is a severe destruction of erythrocytes. To compensate for this excessive destruction, extra medullary centers of erythroblastic tissue appear in the liver, the spleen and bone marrow. The peripheral blood shows a severe anemia (from hemolysis). Numerous nucleated red blood cells, edema, pallor or jaundice may be observed and for these reasons the disease has been variously described in the literature as fetal hydrops (universal edema of the newborn), familial icterus gravis, or congenital anemia of the newborn.

Erythroblastosis has assumed increasing importance since Levine and his co-workers (1941) discovered an abnormal hemagglutinin (antibody) in the serum of mothers with infants suffering from this disease. This antibody agglutinated the red blood cells of the infant and father. He demonstrated that this blood factor was closely related to the anti-rhesus serum produced in rabbits by Landsteiner and Wiener in 1940. This agglutinin was designated as Rh positive and is found in 87 percent of the population. The serum from mothers of erythroblastotic infants lacked this agglutinin and was termed Rh negative (13 percent of the population). It is well to follow closely the steps outlined below by Levine and others because it will lead to a clearer under-

standing of the manner in which erythroblastosis develops.

Quoting Levine: "It is now established that erythroblastosis fetalis is caused by isoimmunization* of the mother by a dominant hereditary blood factor in the fetus; most frequently, the Rh (rhesus) factor. In more than 90 percent of the cases the father's blood contains the Rh factor (positive), the mother's blood lacks the factor (Rh negative), while the fetal blood must possess it (Rh positive). The two essential steps in the pathogenesis of erythroblastosis fetalis are (1) the response of the Rh negative mother to the foreign Rh positive fetal blood by production of anti-Rh agglutinins, and (2) the continuous passage of maternal anti-Rh agglutinins through the placenta, to react with and hemolyze the susceptible fetal Rh positive blood." Levine has stated that in about 90 percent of cases the erythroblastosis is caused by Rh incompatibility. The other ten percent are due to some other factor, usually the common agglutinogens A and B, or some other factor not yet discovered.

SYMPTOMS

The symptoms and signs of the disease are the results of the excessive hemolysis, the abnormal centers of erythrocytic reproduction, and the interference with functions of the organs involved, chiefly the liver and spleen. Usually the first abnormal sign observed is jaundice, which may be present, in severe cases, at birth. There are all gradations of jaundice and anemia and quite often the jaundice masks the severity of anemia. Various signs of hemorrhage are frequently present and this is probably due to a reduction of platelets.

The infant usually presents a picture of shock, which is exhibited by lassitude, exhaustion, refusal to nurse, a weak fast pulse and heart tones of poor quality. Respiratory embarrassment is frequent in the severe cases. Fever is usually absent unless intracranial injury is sustained or infection is present.

The anemia may be mild during the first 24 hours but it gradually increases in se-

verity during the next few days. Nucleated erythrocytes are found in the peripheral blood in normal infants during the first few days but a substantial increase in the number of nucleated red cells should be regarded as an important sign, particularly so if it is associated with reticulocytosis and hyperchromic macrocytosis. (The color index is usually greater than unity.)

DIAGNOSIS

The diagnosis of fetal erythroblastosis is of the utmost importance to those who practice obstetrics and pediatrics. Since Levine established the role of the Rh factor many lives have been saved by aggressive intelligent management. It is to be remembered that there are three distinct clinical entities: fetal hydrops, icterus gravis, and congenital anemia of the newborn. The fact that none of the manifestations of the disease are pathognomonic increases the diagnostic difficulties.

The symptoms and signs most suggestive of fetal erythroblastosis are the early appearance of jaundice, anemia associated with normoblasts, erythroblasts, macrocytes and reticulocytes in the peripheral blood. The liver and spleen are frequently enlarged, and when the vernix is yellow and the placenta enlarged additional evidence is presented. If the mother is Rh negative and the father and infant are Rh positive, with the above mentioned symptoms the diagnosis is almost certain. Additional evidence is added with the finding of anti-Rh agglutinins in the mother. The absence of anti-Rh agglutinin, however, does not exclude the disease. Levine has determined that in approximately 50 percent of mothers anti-Rh agglutinin could not be demonstrated.

If erythroblastemia and anemia and anti-Rh agglutinin are present in the mother's blood, the agglutinin may almost be regarded as specific, but there are many instances reported where the anti-Rh agglutinins were present but the infants were normal.

The differential diagnosis is between syphilis, sepsis of various types, physiologic icterus neonatorum, and congenital atresia of the bile ducts. It is not within the scope of this paper to go fully into the differential diagnosis.

TREATMENT

As has been indicated, treatment is directed toward replacement therapy with

*Isoimmunization (Levine), in contrast to heteroimmunization, implies immunization with the same species. Isoimmunization, in man, by means of red blood cells, cannot occur unless there exists individual differences of human blood.

matched Rh negative blood, and in its absence with matched Rh positive blood or with blood of unknown Rh factor.

Comparatively large blood transfusions may be given, using about 10 cc. of blood per pound of body weight. This corresponds to a transfusion of 1200-1500 cc. in an average adult, which is more than one fourth of the total blood volume. Because the blood group is established in approximately 11 percent of newborn, it is advisable to type and cross match the blood. The frequency of the transfusions depends on the severity of the anemia and the general condition of the infant. As a general rule I feel it is wise to transfuse if the count is less than 3,500,000 or if the hemoglobin is less than seventy percent.

When the Rh factor is assumed to be responsible for erythroblastosis it is advisable to use properly matched Rh negative blood, but it is not imperative to do so as I shall point out later. Theoretically, and practically, the infant's blood may still contain some uncombined anti-Rh agglutinins derived from the mother. These agglutinins will react with additional Rh positive blood (varying degrees) and lessen the value of the transfusion. When the Rh negative blood is used there is no reaction (between the cells and the anti-Rh agglutinin), the recovery is quicker and transfusions do not have to be repeated as frequently.

It is not advisable to use blood from the mother (who is Rh negative) because the anti-Rh agglutinins in her blood will further react with the positive cells of the infant and produce more anemia.

Practically, it is often extremely difficult to get Rh negative blood (only 13 percent) of the correct type. This may be due to the lack of fresh anti-Rh serum (90 day dating), or to the absence of a properly trained technician, or to inability to locate the proper donor. Under these conditions it is advisable to use any cross matched blood, whether you know the Rh factor or not. The results may not be as good, but in many cases it will be life saving. My first case of erythroblastosis, W. K., is a living example of two Rh positive blood transfusions. There was considerable improvement following each transfusion, which could be explained by the infant having a small amount of anti-Rh agglutinins in his blood. It was about ten

days after the first transfusion before it was possible to find out that the donor was Rh positive.

General supportive treatment of the infant is to be encouraged. It may become necessary to use subcutaneous infusions (lactate Ringer's solution is preferred) to combat dehydration. A dehydrated infant will give excessively high blood counts due to hemoconcentration and a false sense of security may prevail. The weight of the infant should be carefully watched and care should be observed in its evaluation as some hydrops may be present. Liberal amounts of vitamins are probably of some value and certainly without danger. Intramuscular injections of whole blood are not dependable and should not be used. There is little evidence to support the administration of liver extracts and iron during the first week or ten days. After the acute phase has subsided, the parenteral use of potent liver extract (including the vitamin B complex) has some merit in hastening of reticulocytosis. Iron, preferably in the form of ferrous sulphate, should be given if it is tolerated. Feeding by gavage is advocated for those infants who nurse poorly. This type of feeding will offer fluid as well as food and its use is to be encouraged in competent hands. The administration of vitamin K should be given parenterally to all cases of erythroblastosis, and a strictly premature routine will help to combat shock, exposure and heat loss.

Wiener and Wexler suggest that breast feeding is contraindicated because antibodies may be present in the breast milk.

CASE REPORT M. M.

This male infant was delivered by cesarean section because of a previous section. He weighed 8 pounds, 6 ounces and appeared to be normal. The placenta was not unusual but it was not carefully examined because no difficulty was suspected.

The mother has one living girl, 10 years of age, who is Rh positive. One infant delivered by cesarean section three years ago died about 13 hours after birth. The cause was not determined.

When M. M. was about 8 hours old the nurse reported that he was jaundiced. He was worse the next morning. The infant was Rh positive. When he was 36 hours old he was transfused (blood from the father) with 75 cc. of Rh positive matched blood be-

cause the mother had been reported Rh positive. As all other findings were suggestive of erythroblastosis, another examination was requested and the blood was reported Rh negative. Another examination showed the mother to be Rh negative. Before this was determined a second transfusion was completed, using Rh positive blood. No reactions were observed and the infant was doing fairly well so he was allowed to go home. One week later his red cell count fell and another transfusion was deemed advisable. A donor who was type O (universal donor) Rh negative was finally found, but on cross matching agglutination was present so the father's blood was again used. A hunt for Rh negative donors continued and finally five days later he was given 75 cc. of Rh negative type A blood. This negative transfusion seemed to hold up for a longer period and it has not been necessary to repeat the transfusion.

It seems that two main conclusions may be drawn from this case. The first is that any matched blood may be used in an emergency and that fair to good results may be obtained. It is, however, better treatment to use Rh negative blood as the blood cells will last longer because the Rh negative cells do not agglutinate with the anti-Rh agglutinins, which have been transferred from the mother, through the placental barrier, to the infant.

The second conclusion is that we must take the initiative in building up an Rh negative donor service. There is a distinct need for the cooperation of the laboratory, the obstetrician and the pediatrician in the formation of an Rh negative donor registry. This will be responsible for the saving of human lives in every community where it is inaugurated.

HEREDITY

The genetics of the Rh blood factor has recently been clarified. It is thought to be inherited as a dominant trait, and if the father is homozygous (two dominant genes RhRh) and Rh positive and the mother is Rh negative, then all of their offspring will be Rh positive (but not necessarily erythroblastotic as other factors are involved in its production). If the father is heterozygous (one dominant gene Rh rh) (rh indicates absence of the Rh factor) then approximately 50 per-

cent will be Rh positive and the other half Rh negative.

At this time there is no test to see whether a father is homozygous or heterozygous but the incidence may be roughly calculated if there are several living children. This would be of value if one erythroblastotic infant has been born and the parents would like to know the chances of having other normal children. If one Rh negative child could be found, then the chances of having other normal children would be about fifty percent. If all the children previously born were Rh positive, then the chances of having a normal infant would be negligible.

DISCUSSION

The immunization of the mother apparently proceeds very slowly for it is extremely rare to find the disease in the first pregnancy. Each succeeding pregnancy increases the titer of the anti-Rh agglutinins in the mother and erythroblastosis is more liable to occur. Considerable investigation is proceeding to determine why erythroblastosis is not observed more often when the "proper Rh setup" is present. For some unknown reason it appears that the placental barrier is let down and that formed elements proceed through the placenta in either direction. Another prerequisite is that the mother must be capable of forming antibodies. If these limitations were not operative, the incidence of the disease would be much higher, since the mating of an Rh positive male and an Rh negative female occurs in about 11 percent of marriages.

Tremendous progress in the pathogenesis of erythroblastosis has been made in the last few years. The varying clinical manifestations are compatible with the theory developed by Levine.

It is reasonable to assume that fetal hydrops is the end result of intense isoimmunization over a prolonged course and that anemia of the newborn is a less intense isoimmunization. Icterus gravis is regarded as the intermediate type and is much more common.

It is certainly the moral obligation, and quite possibly a legal obligation of every physician practicing obstetrics, to be familiar with the diagnosis and treatment of erythroblastosis. The dangers attending an improper evaluation of the symptom complex are obvious. Although it has not been pre-

viously pointed out in this paper, there is potential danger during the entire pregnancy of the Rh negative mother (if the father is Rh positive). The danger occurs when a transfusion of Rh positive blood is given to a mother having Rh negative blood. It therefore becomes necessary, if the physician is to assume responsibility for the mother and infant, to determine the Rh factor of the prospective mother and father in every obstetrical case. If they present the same Rh factor no isoimmunization will be present. If the father has an Rh positive factor and the mother a negative Rh then it is the duty of the physician to have an Rh negative donor of the proper type available for any emergency.

Investigators are searching carefully for some method of prophylaxis, but at this writing nothing of importance has been observed.

The obstetrician is frequently confronted with the possibility of erythroblastosis and he must decide whether it would be efficacious to induce labor, perform a cesarean section or wait for a normal labor.

The object of interference would be to attempt an early arrest of the hemolytic process by removing the source of the anti-Rh agglutinins and later with blood transfusions.

The clinical laboratory will of necessity play a very important part in the proper handling of these cases. The technique is quite exacting and the tests are numerous, and it will require scientific knowledge and humanitarian cooperation with the physician.

SUMMARY

This paper presents a brief summation of the factual data necessary for the proper management of an infant with erythroblastosis. It has emphasized the necessity of early diagnosis and the problems incurred in intelligent scientific treatment.

Note: Our laboratories, under the supervision of Dr. I. M. Wise, are now available for Rh testing each Tuesday afternoon. Physicians are requested to send prospective mothers for testing. If the mother is Rh negative, the husband is advised to have his Rh factor determined the following week.

The Rh factor is determined on the female recipient before a transfusion is given.

Note: Wiener has published a special vocabulary to be used in expressing the new factors in Rh terminology. *J. A. M. A.*, p. 294, Feb. 3, '45.

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Private Practice and Public Health—When the energies of the people are again diverted from war to the pursuits of peace, the impetus will be strong to do for purposes of social experimentation what has been learned to do for purposes of war. Initially embellished to political end the trend toward complete social security will be accelerated unfettered by lack of course or destination. To achieve the ultimate of social security a planned economy is required; the planned economy necessitates arbitrary directorship, and individual liberty will be sacrificed for the promise of freedom from necessity, and the war to free man from man will have been for naught. Health is included in the objectives for security of a given standard of life, and we, citizens and physicians, are therefore doubly concerned.

Security is an obligation of society, but to retain the democratic pattern this security must not jeopardize the individual incentive. The guarantee of a minimum of food, shelter and clothing sufficient to preserve health is just, and feasible in and compatible with the democratic state. Security of the kind that promises protection against diminution of a given standard of living regardless of the individual's own effort endangers the general freedom and eventuates in the need for dictation. In the socio-economic evolution the program for health must be in harmony with that plan of security which is not inimical to the democracy.

The subject of health is multi-faceted and has been disarrayed, maliciously and unwittingly, to the end of confusing and dividing those who by virtue of education and experience are best able to offer counsel. From the camp of public health physicians comes a plan for a curative medical service program while from the practitioners, looking askance at public health as an annoying intruder, we learn how by our curative art life expectancy has been benevolently extended. Inadequate medical care because persons are unable to pay the costs of services on an individual payment basis is, in a measure, accepted by practitioners as evidenced by our preoccupation with prepayment plans to the exclusion of consideration of other facets in the problem.—*Schulze, Texas State J. Med.*, August 1945.

LYMPHOSARCOMA OF THE APPENDIX

REPORT OF CASE

MAJOR WILLIE E. WILSON

Medical Corps, Army of the United States

Lymphosarcoma of the appendix is an extremely uncommon finding and the diagnosis is rarely, if ever, made preoperatively. At operation, it is very unlikely that any surgeon other than one of vast experience would ever be able to recognize the condition in its early stage. It is, likewise, relatively certain that, in the vast majority of cases, the diagnosis can only be made by the pathologist.

That this malignant neoplasm rarely involves the gastro-intestinal tract has been demonstrated by McSwain and Beal¹ in a study of the total admissions to the New York Hospital, and by Bodenheimer,² in a review of the admissions to the Shreveport Charity Hospital. The former investigators found only twenty reported cases out of a total of 149,469 admissions from 1933 to 1942. In their series of cases, carcinoma was found to occur fifty-one times more frequently than sarcomatous lesions, the latter constituting only 1.9 percent of all malignant lesions of the gastro-intestinal tract. Of the twenty cases studied by them, there were two of the cecum, involving the appendix and terminal ileum, and two involving only the appendix. Of the two involving only the appendix, an appendectomy was performed.

In Bodenheimer's study of 217,468 admissions to the Shreveport Charity Hospital, covering a period of 16 years, only six cases of sarcoma of the gastro-intestinal tract were reported. They were not classified histologically and the number of lymphosarcomas, if any, is not known. None of the six cases reported involved the cecum or appendix.

There are some who do not like to classify lymphosarcoma under the sarcomatous group of neoplasms. This has caused much confusion in the literature. The question is

whether or not lymphosarcoma is to be classified with the true sarcomas or if it is to be denied entrance into this large family of neoplasms and classified with the group of lymphomas, which are: (1) simple lymphomas, (2) leukemia, (3) pseudoleukemia and (4) Hodgkin's disease. It is certainly related to the lymphomas in that it is a true malignant neoplasm arising from lymphatic tissue, although it is very different from them in that the systemic characteristics of leukemia, pseudoleukemia and Hodgkin's disease are not present. The term sarcoma, as is generally accepted, covers a broad field of neoplasms, and is used to differentiate this group of malignant tumors from the carcinomatous group of neoplastic diseases. They are classified histologically, according to the tissue from which they have their origin, as myosarcoma, neurosarcoma, fibrosarcoma, chondrosarcoma, osteosarcoma, liposarcoma, myxosarcoma, angiosarcoma, lymphosarcoma and gliosarcoma.

Ewing's definition of sarcoma, which is generally accepted, is that it is a malignant tumor composed of connective tissue cells. If this definition is recognized, then the lymphosarcomas belong to this group of tumors because they are made up of lymphoid tissue which is classified as connective tissue.

CASE REPORT

A white, American-born soldier was admitted to the hospital 31 December 1944. He had been well until three days prior to admission when he developed a generalized cramping abdominal pain and nausea, loss of appetite, and headaches. Two days later, the pain shifted to his right lower abdomen and it became dull and constant in character. Twenty-four hours later he reported on sick call and was seen by a physician who had him admitted to the hospital with a diagnosis of appendiceal abscess. He stated that he had not slept for three nights because of the discomfort of his abdomen.

The physical examination on admission to the hospital revealed a well developed, well nourished, 19 year old male. His color

1. McSwain, Barton, and Beal, John M.: Lymphosarcoma of Gastro-Intestinal Tract, Report of Twenty Cases, *Ann. Surg.*, 119:108-123 (January) 1944.

2. Bodenheimer, J. M.: Sarcoma of the Small Intestines, Case Report, *Am. J. Surg.* 66: 404-406 (December) 1944.

was good and he did not appear to be in severe pain or to be acutely ill. Except for his abdomen, there was nothing remarkable elicited on examination. A tender fixed mass, approximately the size of a small orange, could be felt in the right lower quadrant. There was no rigidity, no distention, no rebound tenderness, and the liver, spleen and kidneys were not palpable. His temperature was 99 F. Pulse and respiration were normal. The blood count was as follows:

Red blood cells	4,680,000
White blood cells	12,600
Neutrophils	50%
Lymphocytes	43%
Monocytes	1%
Juveniles	3%
Eosinophils	2%
Stab	1%

A diagnosis of perforated appendix with abscess formation was made and he was put on 1 gm. doses of sulfadiazine every four hours. The following day, the white count was 15,900, with no significant change in the differential.

There was very little change in his condition until about the tenth hospital day, when he appeared to be anemic and the sclera showed a faint icteric tint. The blood picture at this time was as follows:

Red blood cells	3,190,000
White blood cells	7,350
Differential:	
Lymphocytes	59%
Neutrophils	36%
Juveniles	3%
Eosinophils	1%
Stab	1%
Icteric index	13.6

He began to lose ground and the mass increased until it was about the size of a grapefruit. The blood picture on 15 January 1945 was:

Red blood cells	3,360,000
White blood cells	5,950
Hemoglobin	11.5%
Differential:	
Neutrophils	16%
Lymphocytes	74%
Stab	4%
Basophils	3%
Eosinophils	1%
Juveniles	2%

12 nucleated red cells per 100 white blood cells
Blood chloride 363
Blood culture—negative

He was given 500 cc. of blood on two occasions after developing anemia. Since ad-

mission his temperature had ranged from normal to 100° F. It was felt that the abscess was well localized and, in view of his decline, it was believed that nothing would be gained by waiting longer before performing surgery. On the eighteenth hospital day, therefore, he was operated on.

The abdomen was opened through a McBurney incision. The peritoneal cavity contained approximately 750 cc. of free, slightly blood tinged fluid. The appendix was unusually large, being 12 cm. in length and 1½ cm. in diameter. It had a dull grayish appearance; the wall was thickened, firm and friable. It was sharply bent upon itself at about the middle third, and the tip was pointing toward the anterior abdominal wall, which was part of the mass that could be felt on examination. The meso was thick, hard, friable and very vascular. The cecum was frozen to the retroperitoneal structures and the area at the base of the appendix was thickened, hard and friable. The adjacent loops of small bowel were inflamed and adherent, the adhesions were not firm and could easily be separated. The wall of the bowel was not thickened and had a normal feeling. The appendix was removed and sent to the laboratory for examination, where the diagnosis of lymphosarcoma appendix was made. Study of sections of the appendix showed a well preserved, though markedly thickened wall, with large numbers of lymphocytes scattered diffusely through all coats. They had no organic pattern and varied in size, shape and staining reaction. Some of tumor size and some with atypical mitoses were readily found. The mucosa was involved to a lesser extent and many of the glandular cells were normal. The lymphoid follicles in places were well preserved. The neoplastic cells had extended and replaced the periappendiceal fat. The frozen section diagnosis was lymphosarcoma of the appendix. It was the belief of the pathologist that the primary site was not in the appendix.

The patient ran a smooth convalescent course, and on the eleventh postoperative day he was transferred by plane to a General Hospital for deep x-ray therapy.

In retrospect, it is quite obvious that two mistakes were made: the first, in the preoperative diagnosis; and the second in the diagnosis at operation. It is doubtful, how-

ever, if this influenced the ultimate outcome of the case to any extent. As to the mistaken preoperative diagnosis, hardly anyone would have hazarded a guess of malignancy in the presence of such typical signs and symptoms of appendiceal abscess. As to the misinterpretation of the findings at operation, it was obvious that we were dealing with an unusual condition and the question of malignancy was considered. To have undertaken an extensive surgical resection in the face of presenting evidence, however, would most certainly have been extremely radical.

A differential diagnosis of such conditions is often impossible due to the different aspects that certain inflammatory processes may assume. As Ewing has stated, many sarcomas show such marked histologic resemblance to inflammatory processes that pathologists have long been inclined to accept, in a certain sense, the inflammatory or even the parasitic origin of sarcomas. Lymphosarcoma, especially, stands out in this respect.

The leucocyte count and the differential in this case were by no means typical of an appendiceal abscess, yet the picture was confusing because it was not known just what part the sulfa drug might have played in changing the blood picture. Furthermore, there are no particular character changes in leucocyte count in lymphosarcoma. It may

be normal or there may be a moderate leucocytosis or a leucopenia. Only in the terminal stage does the blood reveal any findings that are to a great extent characteristic, which is not until the blood is involved by the pathologic lymphoblast cells.

It is not quite clear just why this patient developed such a rapid anemia. Although anemia may be present in varying degrees in approximately 30 per cent of cases, it is not characteristic of lymphosarcoma in its early stage.

The primary site for lymphosarcoma is most often the tonsils, the cervical or mediastinal glands, and less commonly the abdomen. It spreads back by direct extension and by metastasis to the neighboring group of glands. In this particular case, it cannot be said with certainty just where the primary lesion began. It was the appendix, the ileocecal glands, or the retroperitoneal structures just posterior to the cecum. It is most likely that it began in the ileocecal glands and spread by direct extension to the appendix and cecum.

The prognosis in lymphosarcoma of the gastro-intestinal tract is extremely unfavorable and it usually runs a rapid course, extending over a period of only a few months, although complete temporary remissions frequently follow deep radiation.

HOSPITALS NOW . . . AND TOMORROW

A. C. BACHMEYER, M. D.

Director of Study

Commission on Hospital Care

Chicago

Lack of incentive for young doctors to begin practicing in rural and semi-rural areas is one of the big problems which both the public and the medical groups are facing today. Large hospitals, medical centers and city practices attract many young physicians because of the well-equipped laboratories, skilled technicians and opportunity for continued study. In vast stretches of rural America there are no hospitals and the small number of physicians which serve these areas must work without the valuable equipment and assistance which a hospital affords.

The nation's postwar planning on local, state and national levels is working toward construction of hospitals to serve those neglected areas. But before any real planning can be done it is first necessary to know exactly what hospital facilities and services are available at the present time. Last fall the Commission on Hospital Care was established through the efforts of the American Hospital Association and was given the job of taking the vital inventory of the nation's hospital facilities. The Commission on Hospital Care is located at 22 East Division Street, Chicago 10, Illinois. It is an impar-

tial, fact-finding body and its members are outstanding men and women of national repute who have a sincere interest in public welfare. They include members of the medical, dental and nursing professions; hospital trustees and administrators, public health, medical education, industry, labor, agriculture, public welfare and the fields of sociology and economics. The work is financed by grants from the Commonwealth Fund, the W. K. Kellogg Foundation and the National Foundation for Infantile Paralysis.

The objectives of the Commission on Hospital Care are to take a census of the present hospital and public health facilities in the nation; appraise their capacity for service; establish standards for evaluating physical facilities, organization and management of hospitals; determine the overall national need for additional facilities and service; formulate a national coordinated hospital plan and to suggest methods by which that plan can be realized.

National interest in the survey is widespread. Thirty-five states are in one phase or another of their studies. Surveys are in process or about to start in Iowa, Massachusetts, Michigan, Minnesota, Missouri, North Dakota, New Hampshire and Wisconsin. Survey legislation has been enacted but surveys are not yet started in Delaware, Indiana, Maine, North Carolina, New Mexico, Oklahoma, Oregon, Rhode Island, Virginia, Vermont and Washington. Survey legislation is pending in California, Florida and South Carolina. Survey organizing committees have been established in Illinois, Kansas, Kentucky, Louisiana, Montana, Nebraska, Ohio, Pennsylvania, Tennessee, Texas and West Virginia. States which are proposing that the Postwar Planning Commission conduct the survey are Alabama and New Jersey, and it is understood the survey has been completed in the first named. States which have made preliminary hospital studies are Georgia, Maryland and Utah. The commission is conducting a pilot-study in Michigan. The inventory of Michigan's 700 hospitals, including nursing homes and other institutions for the care of the sick is now nearly completed. The method used in Michigan will serve as a pattern which other states may use in making their surveys if they so desire.

A detailed study of every hospital in the entire country would take more time and money than the Commission has at its disposal. Therefore, each state is being urged to carry on its own study. In this manner, local interest in the problem will be aroused. Each state will become immediately aware of its needs and a desire to furnish adequate hospital service will be stimulated. It is suggested that the survey be conducted by a single designated state agency in close cooperation with the state planning commission and the health department. Representatives of medical, dental and nursing professions, hospital administrators, labor, industry, agriculture, public health and welfare should be represented on each state study committee. Although each state carries on its own study, The Commission on Hospital Care will act as a coordinating body and furnish a standard questionnaire for use by all states making the survey. Other work materials, as well as the aid of technical consultants, will be provided by the Commission. The final job of tabulating the information will be done by the Commission staff in the national office.

The hospital and the private physician are a team against sickness and disease. For a long time physicians and hospitals have worked together—and fought together—to preserve life and health. The technological advances of medicine have made that teamwork more vital and more effective than ever before.

Now that the health spotlight has swung to the hospital, we are becoming increasingly aware that there are not enough hospitals to serve everyone who needs hospital care. But the spotlight has also swung to *planning*. Before we build, we have to *plan* so that every area—rich or poor—will have its share of the vital hospital facilities. That is why the Commission on Hospital Care is directing this county-by-county survey of the nation's hospitals. In this way we can put a magnifying glass to the hospital problem in each area, yet retain a picture of the overall needs of the county, the state and the nation.

It is part of the Commission's undertaking to solve the problem of uneven distribution of hospitals and physicians.

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TOPICAL APPLICATION OF THE SULFONAMIDES

"Among the prerogatives of man are the adherence to and the enjoyment of fads. From his earliest days the human individual has been a faddist in his customs, clothing, food, literature and entertainment. Medicine has been justly accused of this practice, and within the past two decades there have been many new trends and fancies to intrigue the physician. In the not distant past, focal infection enjoyed its day in the lime-light but it has gradually been reduced to its proper sphere. For a time allergy was hailed as a panacea for many diverse conditions, but it, too, has assumed its limited though important position. The correct evaluation of the vitamins despite the publicity promulgated about them is now recognized. The sulfonamide craze is one of the most recent popular fads."

"It is not the purpose of this paper to belittle any of the above-named trends, as each has proven its right to an important position in medicine, but in their infancy, due to enthusiasm, most fads are overemphasized."

"One of the great achievements of modern medicine has been the discovery and development of sulfonamide therapy. This

group of drugs when administered internally has been an effective agent in combating many types of infection. Its toxicity and its reactions, when so administered, have been thoroughly noted and recorded. However, the results of topical applications of the sulfonamides have not been properly evaluated, nor have the dangerous reactions engendered by their use been sufficiently recognized."

The above are the opening paragraphs of the article by Lane¹ inquiring into this widely abused and greatly misunderstood form of therapy. The St. Louis observer goes on to tell us that "the drugs have been incorporated into many products, which are sold indiscriminately. A few of the many products containing the sulfonamides, which can be purchased over the counter, are ointments and creams containing sulfathiazole and sulfadiazine; the powdered forms of these same drugs as well as sulfanilamide powder; 'band aids' into which a sulfonamide powder has been incorporated; nose drops and eye ointments; oily lotions advertised as of benefit for psoriasis and other skin diseases; a gum for mouth infections and even a shaving cream. The result is that many individuals are unthinkingly becoming exposed to these drugs, whose sensitizing properties are too little known. During the past two years medical literature has contained a number of pertinent articles concerning the use and abuse of the sulfonamides when applied topically."

We are further told that "it is the experience of all dermatologists that reactions occur frequently from the topical application of the sulfonamide drugs. . . . While it is true that other chemicals such as mercury, resorcin, sulfur and tar will often irritate and sensitize the skin, the most frequent offender at the present time is the sulfonamide group."

Lane briefly reviews the literature and presents a number of cases of his own in which the complications ranged from slight to serious, including one death. And he tells us "it appears that of the sulfonamides used topically the most potent offender is sulfathiazole."

1. Lane, Clinton W.: Observations on the Topical Application of the Sulfonamides. South. M. J. 38: 125, Feb. 1945.

The author, in conclusion, says: "1. The topical application of the sulfonamides should be restricted to chancroidal and primary pyogenic infections of the skin. In the latter they should be used only after other therapy has failed.

"2. The duration of the application should be limited to five days, as sensitization reactions occur frequently if the practice is continued beyond this period.

"3. Reactions on the skin may be both local and general. The types of reactions are varied, but are frequently of the eczematous type.

"4. The local and sensitization eruptions will usually disappear within a short period of time if the cause is recognized and removed and if soothing applications are prescribed. On occasions the eruption may persist for a lengthy period, may increase in severity and rarely death may occur.

"5. The reaction of the skin to a sulfonamide applied to a minor ailment may prevent its future employment in some severe infection.

"6. Unfavorable reactions to sulfonamides occur more frequently than is now recognized: the incidence of these reactions will increase as the products containing the compound are more widely advertised and employed. Definite restrictions should be placed on the indiscriminate sale and administration of the sulfonamides."

Lane is indeed upon firm ground when he

deplores and warns against the promiscuous and widespread use of the topical application of the sulfonamides. The public cannot be expected to be informed as to the hazards of this form of therapy and, most unfortunately, all too many physicians do not fully realize the frequency and severity of its complications. It is quite possible that the time has come when preparations containing sulfonamides, whether for external or internal use, should be obtainable only upon prescription.

COL. L. L. HILL IS BASE SURGEON

Lt. Col. Luther L. Hill, formerly of Montgomery, Alabama, has recently assumed the position of Base Surgeon of the Sedalia Army Air Field, a First Troop Carrier Command installation near Warrensburg, Mo.

Prior to his present position, the Lieut. Colonel served in a like capacity at Bergstrom Field, Texas. He was the first medical officer to arrive at that field after the Troop Carrier Command activated it and opened the hospital there in September of 1942.

Before entering the service, Lt. Col. Hill had his own practice in the Hill Building in Montgomery and brought 11 years of general surgery practice in Montgomery with him as his best recommendation for the important work required of him by the Air Force.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

B. F. Austin, M. D.
State Health Officer

LOSS OF CONSCIOUSNESS

The average person, lacking training in first aid, seldom feels quite so helpless as when someone suddenly loses consciousness. One's first thought is to obtain a physician as quickly as possible, but often that cannot be done for a considerable time, especially under present wartime conditions. What to do until he arrives is indeed a baffling problem. Failure to do the right thing, or, equally important, doing the wrong thing may have serious, if not fatal, consequences.

In order that readers may know how to make the best possible use of those minutes or hours before the doctor comes, this paper will be devoted to a consideration of some of the most important conditions involving loss of consciousness and how they should be handled.

One of the most common causes of loss of consciousness is apoplexy, or what is more widely known as a stroke. Fortunately, it is a condition to which the young or the younger middle aged are not susceptible as a general thing, as it is found almost entirely among those who have reached or passed their fiftieth birthdays. Various conditions may predispose a person to it, but the most

common are damage to the arteries, hardening of the arteries, known medically as arteriosclerosis, and high blood pressure, or hypertension. A stroke occurs when a small artery ruptures in the brain, causing blood to flow from the broken area. This forms a blood clot, and the clot produces pressure on the brain, which in turn produces unconsciousness and paralysis in that part of the body controlled by the brain area affected by the pressure. If a certain area of the brain is affected, for example, the right arm will become paralyzed; if a certain other area is involved, then the left arm is paralyzed. Pressure in other parts of the brain brings paralysis of the right or left leg, a side of the face or some other part of the body.

Probably the most conspicuous symptom of apoplexy is complete loss of consciousness on the part of the victim. The face is usually red, although there are a small number of cases in which it turns ashen gray. The pulse beat is abnormally slow, but the pulse is strong. It immediately becomes evident that paralysis has set in, as the affected arm, or leg or perhaps a whole side of the body becomes limp and partially, if not entirely, useless. Often the mouth is drawn to one side, and the pupil of one eye is abnormally large. The victim snores loudly.

Whenever a person suffers a stroke, his companions should quickly get him into a reclining position, with the head and shoulders slightly higher than the rest of the body. If ice bags are available, they should be applied to the head. If they are not to be had, then cold cloths should be used. The victim should be kept at complete rest, which means that he should not be moved, unless moving is absolutely necessary. If it cannot be avoided, then he should be moved with extreme care. No stimulants of any kind should be used, as that would increase the heart action and cause more pressure upon the brain. The victim should be covered with enough blankets or other cloths to keep him warm.

Even more common than apoplexy and, fortunately, much less serious is fainting. It is not as common among young women of our day as it was in mid-Victorian days when it was considered a sign of femininity and occupied considerable space in the novels of that period. That may be regarded as proof

that the women of our time are healthier and more robust than those who grew to womanhood during the reign of that good queen.

Perhaps one of the reasons why women of the Victorian era were more given to fainting spells—in both fact and fiction—than those of the WAC and WAVES era is that present-day women take eating and nutrition much more seriously than their grandmothers did and live more healthful, wholesome lives generally. For inadequate food is one of the chief contributing causes of fainting. Fatigue is another, and that also throws light upon the difference between the fainting propensities of the present and an older generation of women. Unaccustomed to any form of exercise more strenuous than the lightest of household tasks or genteel school teaching, the Victorians almost never developed their muscles properly, and unusual exertion proved too much.

Other conditions, which may or may not be materially different from their Victorian counterparts, also play a part in the fainting statistics. Stuffiness, such as that prevailing in a crowded or improperly ventilated room, is a factor. So also is emotional shock of any kind, such as that resulting from receiving bad news. The sight of blood is another, while the loss of blood, bringing physical weakness, makes one more susceptible to fainting. Standing in one position when thoroughly fagged out, as troops often do after a long, hard march or parade, does the same. Frequently there is no specific cause that one can identify.

The best preventive of fainting is of course to avoid the conditions that cause it. Everyone should, if possible, work and play in well ventilated rooms. All should obtain plenty of exercise so as to develop good, strong muscles. All should eat plenty of good, wholesome food, properly chosen from a dietary standpoint. All should, in brief, do everything necessary to keep the general health at the highest possible level. And one should be careful, especially in hot weather, not to overtax one's strength.

Usually a fainting spell gives some warning, although it may not be recognized as such. Whenever one begins to feel faint, one should lie down, with the head at least level with, if not lower than, the heart so as to send more blood to the head. If it is im-

possible to lie down, the victim of the fainting spell should lean over in such a way as to place the head between the knees or kneel on one knee, as though tying his shoes or picking up something from the ground. As soon as possible the victim should be placed in a reclining position.

Pallor is one of the most characteristic symptoms of fainting. There is usually profuse perspiration, especially on the forehead. The victim becomes dizzy, and a dark cloud passes before his eyes. The slight pallor that marked the onset of the fainting spell becomes much more pronounced, and so do the dizziness and unsteadiness of step. Unless he is able to lie down immediately or is assisted to a lying or sitting position, he is likely to fall in a heap. The breath comes in gasps, and the pulse is weak. The pulse beat usually is also abnormally slow.

The treatment of a fainting spell is essentially the same as the procedures employed when trying to prevent one. The victim should be kept in a reclining position. The head should be kept lower than the rest of the body. The collar and other close-fitting or binding clothing should be loosened or removed entirely. If some form of ammonia, not too strong, is at hand, this should be used as an inhalant. Smelling salts are also helpful, and the face should be sprinkled with cold water to stimulate the flow of blood to the brain. Usually the victim does not lose consciousness for long, and as soon as it returns, some form of stimulant, such as aromatic spirit of ammonia, coffee or tea, should be given. The victim should not be allowed to get up until fully recovered. If recovery is not fairly prompt, a physician should be called. Meanwhile, the victim should be kept warm.

Very little is known regarding the cause of epilepsy. It is, however, a result of brain disorder or brain irregularity. Injury to the brain predisposing to epilepsy may occur before birth or during birth. The condition may result from some form of infection that has settled in the brain following certain more or less commonplace diseases—such diseases, for instance, as measles, meningitis, whooping cough or sleeping sickness. It may result also from a severe injury to the head or from a brain tumor. Even illnesses affecting other parts of the body,

such as the kidneys, may have an effect upon the brain and produce epilepsy.

In this condition, as in many others, the first-aiders task is to deal with an attack when it occurs rather than to prevent it from occurring, which is a task calling for expert medical knowledge. Unfortunately, a large percentage of seizures occur without warning, which fact makes especially difficult the work of the victim's friends and others attempting to render first aid.

When an epileptic fit strikes, the victim's face turns pale, the eyes have a glassy stare, with the lids open, he becomes unconscious and falls in a heap onto the floor or whatever may be in the way. He mutters hoarsely, turns blue and starts biting his tongue. In just a matter of seconds he has changed from a normal-appearing member of society to one of the most pathetic of humans. In some cases he even loses control of his bowel and kidney actions.

The seizures are characterized by jerking movements of the head and by movements of the arms and legs. Sometimes there is frothing at the mouth. After a very short while the victim's skin loses its blue color and returns to a semblance of normal. Later the convulsive movements end, and he enters into a state of calm unconsciousness. This may be prolonged, or it may last for only a short time.

Unfortunately, there is very little that the first-aiders can do to restore the epileptic victim to normal, as the seizures seem to have to run their course. There is much, however, which can be done to prevent him from doing himself more or less permanent injury. If it is possible to get to him before he falls, he should be handled in such a way that he will not strike pieces of furniture or otherwise injure himself when he falls. It is particularly important to prevent him from biting his tongue. This can best be accomplished by wrapping a piece of wood or some similar object in cloth or twisting paper into a roll and forcing it between the upper and lower teeth, being careful all the time that this movement itself does not injure the tongue. An improvised pillow should be made of a coat or something else convenient to protect the victim's head. No stimulants should be administered.

Another condition producing unconsciousness is alcoholism, caused of course by the

action of alcohol upon the human body and brain. Its most characteristic symptoms are the strong odor of alcohol on the breath, flushing of the face followed by a marked pallor, strong pulse beat, followed by weakness of the pulse and regular breathing, like that of a person in deep sleep. The victim may be completely or only partially unconscious.

Ordinary alcoholism, without poisoning from denatured or wood alcohol, can only be left to run its course after perhaps several hours of deep sleep. If the victim has drunk non-beverage alcohol, he should be treated for poisoning by forcing him to swallow large quantities of liquids to dilute the poison and also serve as an emetic. Soapy water, salt water, ordinary dish water, and milk are all helpful for this purpose. It is often advisable to follow this with coffee or some other stimulant like aromatic spirit of ammonia.

Remember that, while extremely disturbing to others as well as to the victim, loss of consciousness is not necessarily fatal or even serious. However, it is a signal indicating that something is wrong. It is important that this signal receive a prompt and proper response.

BUREAU OF PREVENTABLE DISEASES

D. G. Gill, M. D., Director

CURRENT MORBIDITY STATISTICS

1945

	May	June	E. E.* June
Typhoid	6	40	21
Typhus	28	55	25
Malaria	199	273	416
Smallpox	0	0	1
Measles	48	17	312
Scarlet fever	65	50	28
Whooping cough	97	170	206
Diphtheria	22	18	21
Influenza	70	52	49
Mumps	145	121	91
Poliomyelitis	5	23	8
Encephalitis	0	0	1
Chickenpox	104	144	39
Tetanus	6	3	5
Tuberculosis	199	251	254
Pellagra	5	1	32
Meningitis	17	25	11
Pneumonia	171	210	147
Syphilis	910	955	1464
Chancroid	6	10	10
Gonorrhea	406	1347	456
Ophthalmia neonatorum	0	0	0
Trachoma	0	1	0
Tularemia	0	1	0
Undulant fever	7	14	5
Dengue	0	0	0
Amebic dysentery	2	3	0
Cancer	262	196	0
Rabies—human cases	0	0	0
Positive animal heads	90	60	

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF LABORATORIES

Samuel R. Damon, Ph. D., Director

SPECIMENS EXAMINED

JUNE 1945

Examination for diphtheria bacilli and Vincent's	387
Agglutination tests (typhoid, Brill's, undulant fever)	989
Typhoid cultures (blood, feces and urine)	1,235
Examinations for malaria	1,293
Examinations for intestinal parasites	1,878
Serologic tests for syphilis (blood and spinal fluid)	37,593
Darkfield examinations	18
Examinations for gonococci	3,333
Examinations for tubercle bacilli	1,648
Examinations for Negri bodies (microscopic)	133
Water examinations	1,369
Milk examinations	2,199
Miscellaneous	461

Total 52,536

BUREAU OF SANITATION

T. H. Milford, M. S. in S. E., Director

SCHOOL SANITATION

Contributed by

J. P. Gilbert

Senior Public Health Engineer

School sanitation is of fundamental importance in the present and future health of the country. Many communicable diseases, such as typhoid fever, dysentery and hookworm infection, can be readily disseminated where there is a lack of proper and adequate sanitary facilities. It is felt that the school toilet is of paramount importance in the community as its influence on health or diseases is greatest. This is obviously true when one considers that if any of the above diseases are present in a community they will most probably be brought to this point through the concentration of pupils attending the school. In any given community practically every home is represented by one child or more attending school.

Prior to 1928 school privy or sanitation work was done largely from blueprints furnished by the State Health Department. Often the privies were modified to suit the ideas of the local officials. Much confusion resulted and the best type of privy was not always constructed for each particular school.

In the fall of 1927 the Legislature passed a state sanitary privy law. When work under this law was begun in some of the southern counties, the matter of school sanitation immediately presented itself. Representatives of the Bureau of Sanitation met with several of the county boards of education and found them in complete accord but with an apparent lack of funds to correct existing sanitary conditions. The appropriations made by these boards for such work were such that many years would have been required to obtain complete sanitation.

Realizing the futility of dealing separately with the various county boards of education, the State Health Officer, at that time, Dr. S. W. Welch, arranged a conference with the Governor. Attending were the State Superintendent of Education, the Chief Sanitary Engineer of the Bureau of Sanitation, and Dr. Welch. As a result, a meeting of the State Board of Education was called to consider the matter. At this meeting the Board voted that one-third of the schools in each county not provided with sanitary toilets must be so provided in 1928, one-third in 1929, and one-third in 1930.

Following the meeting, proper plans and specifications for the construction work were prepared and incorporated in the bulletin entitled "Approved Toilets for Alabama Non-Consolidated and Rural Public School Buildings now Constructed and Requiring Sanitation." Methods for executing and financing the necessary work were a function of the State Department of Education as the responsibility for the work was undertaken by the educational authorities.

Due to the lowered economic status of the state, caused by the depression, the program was not completed. However, it was estimated that approximately two-thirds of the necessary sanitary installations were made.

No unified effort, on a statewide basis, has been initiated since the breakdown of this organized program. Both new and maintenance work has been carried on largely through the efforts of individual county health departments giving advisory aid and assistance to their respective county school authorities.

During the latter part of the school term of 1939-1940, a school sanitary survey was made in those counties being served by sanitation officers. The survey embraced all

counties except Cherokee, Clarke, Cleburne, Geneva, Greene, Henry, Lowndes, Perry, Washington and Wilcox, and included both county and city school systems. Information regarding the Birmingham City School System was not obtained. The type and condition of the sanitation, water supply, hand-washing, and drinking facilities were recorded. These data were tabulated to show the sanitation by schools and the sanitation by enrollment in the various counties. The survey dealt with provisions for or absence of toilets, adequacy where provided, safety as to type in the protection of health, and maintenance, both from the physical and hygienic standpoint. Schools having no toilet facilities or having cess pools, sewerage systems emptying raw into ditches and small branches, non-standard privies, surface privies, and other miscellaneous types of sanitation which are not approved are considered as having unsatisfactory methods of waste disposal.

The tabulation and analysis of the figures of existing conditions present a relatively clear picture of Alabama's pressing need for a systematic statewide program of school sanitation.

A total of 3,848 schools serving some 554,000 children were inspected. Of this number of schools only 34.3 percent were provided with sanitation which was deemed satisfactory. In the strictly city school system surveyed with an enrollment of 81,000, 60 percent of the facilities were unsatisfactory. In the combined city and county system with an enrollment of 473,000, 64.2 percent were unsatisfactory.

By providing adequate sanitation at schools in the county the Department of Education could doubtless further serve its primary purpose—education. Pupils who attend schools that are provided with sanitary toilets and safe water supplies acquire an excellent idea of sanitation which is of value to them throughout life. It is in this formative period of the child's life that the foundation of future health is laid.

Regular inspections by the principal or teachers are necessary if the full educational and health value of sanitation is to be realized and proper maintenance obtained. Fundamental health principles should be taught the child in an effort to secure the maximum health protection for funds expended for sanitation.

BUREAU OF VITAL STATISTICS

Miss Ethel R. Hawley, Acting Director

PROVISIONAL MORTALITY STATISTICS

REPORTED BIRTHS, STILLBIRTHS, DEATHS FROM CERTAIN IMPORTANT CAUSES AND RATES*

ALABAMA, APRIL 1945, 1944, 1943

Births, Stillbirths, and Causes of Death	Number of Deaths Registered— April 1945			Rate (Annual Basis)		
	White	Colored	Total	1945	1944	1943
Births, exclusive of stillbirths	**	**	5824	24.5	24.1	28.7
Stillbirths	**	**	184	30.6	33.5	36.8
Deaths, exclusive of stillbirths	1053	884	1937	8.1	9.5	10.0
Infant deaths:						
Under one year	138	113	251	43.1	49.5	39.9
Under one month	104	73	177	30.4	29.0	23.3
Typhoid and paratyphoid, 1, 2		1	1	0.4	0.4	0.4
Epidemic cerebrospinal meningitis 6	5		5	2.1	4.4	5.9
Scarlet fever 8						
Whooping cough 9	5	2	7	2.9	2.2	7.7
Diphtheria 10	1		1	0.4	0.4	0.9
Tuberculosis, all forms 13-22	41	58	99	41.6	51.6	58.6
Malaria 28					0.9	0.9
Syphilis 30	6	17	23	9.7	15.3	15.0
Influenza 33	17	20	37	15.6	17.9	27.7
Measles 35	1		1	0.4	9.6	1.4
Poliomyelitis 36	2		2	0.8		
Encephalitis 37					0.4	0.4
Typhus fever 39	2		2	0.8	0.4	0.4
Cancer, all forms 45-55	107	54	161	67.7	74.8	74.1
Diabetes mellitus 61	15	11	26	10.9	11.4	18.6
Pellagra 69	3	4	7	2.9	3.9	7.7
Alcoholism 77		1	1	0.4	2.2	1.4
Intracranial lesions 83	107	98	205	86.2	88.0	89.1
Diseases of the heart 90-95	239	169	408	171.5	188.2	188.6
Diseases of the arteries 96-99	10	5	15	6.3	9.6	8.2
Bronchitis 106	3		3	1.3		
Pneumonia, all forms 107-109	31	41	72	30.3	53.4	60.4
Diarrhea and enteritis (under two) 119	6	5	11	4.6	3.1	4.1
Diarrhea and enteritis (two and over) 120					3.1	0.9
Appendicitis 121	10	5	15	6.3	6.6	9.5
Hernia, intestinal obstruction 122	4	7	11	4.6	5.2	6.4
Cirrhosis of the liver 124	5	3	8	3.4	5.2	2.7
Nephritis, all forms 130-132	90	68	158	66.4	71.8	84.5
Diseases of the puerperal state 140-150	7	10	17	28.3	40.4	41.2
Puerperal septicemia 140, 142a, 147	3	1	4	6.7	14.1	6.1
Suicide 163-164	13	1	14	5.9	3.5	12.3
Homicide 165-168	9	19	28	11.8	9.6	8.6
Accidental deaths (exclusive of motor vehicle) 169, 171-195	54	29	83	34.9	62.6	54.1
Motor vehicle 170	25	8	33	13.9	15.8	14.5
All other known causes	193	114	307	129.1	139.6	146.3
Ill-defined and unknown causes 199-200	42	134	176	74.0	78.8	79.5

**Not available.

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific cause per 100,000 population; from puerperal causes per 10,000 total births.

ALABAMA, MAY 1945, 1944, 1943

Births, Stillbirths and Causes of Deaths	Number of Deaths Registered— May 1945			Rate (Annual Basis)		
	White	Colored	Total	1945	1944	1943
Births, exclusive of stillbirths	**	**	5831	23.7	20.2	24.0
Stillbirths	**	**	181	30.1	39.2	34.6
Deaths, exclusive of stillbirths	1210	916	2126	8.6	8.1	8.4
Infant deaths:						
Under one year	139	102	241	41.3	46.0	49.5
Under one month	94	63	157	26.9	25.8	30.5
Typhoid and paratyphoid fever, 1, 2	1		1	0.4		0.8
Epidemic cerebrospinal meningitis 6	5	3	8	3.2	2.0	1.2
Scarlet fever 8						
Whooping cough 9	9	5	14	5.7	2.8	7.2
Diphtheria 10		1	1	0.4		0.4
Tuberculosis, all forms 13-22	41	54	95	38.6	39.6	39.6
Malaria 28	3		3	1.2	1.2	1.6
Syphilis 30	4	21	25	10.2	9.6	12.0
Influenza 33	7	11	18	7.3	7.6	14.4
Measles 35	1		1	0.4	4.0	2.8
Poliomyelitis 36		2	2	0.8		0.4
Encephalitis 37						
Typhus fever 39	4		4	1.6	1.2	
Cancer, all forms 45-55	130	54	184	74.8	64.7	65.1
Diabetes mellitus 61	20	7	27	11.0	8.4	8.4
Pellagra 69	3	5	8	3.2	2.4	3.6
Alcoholism 77					0.8	
Intracranial lesions 83	123	105	228	92.8	72.3	70.7
Diseases of the heart 90-95	281	163	444	180.6	176.2	161.4
Diseases of the arteries 96-99	24	6	30	12.2	8.4	5.2
Bronchitis 106	3	1	4	1.6	0.8	0.8
Pneumonia, all forms 107-109	54	31	85	34.6	40.0	45.9
Diarrhea and enteritis (under two) 119	13	8	21	8.5	6.8	5.6
Diarrhea and enteritis (two and over) 120	1	2	3	1.2	2.4	1.6
Appendicitis 121	11	6	17	6.9	4.8	4.8
Hernia, intestinal obstruction 122	10	12	22	9.0	6.4	6.4
Cirrhosis of the liver 124	6	2	8	3.2	3.2	4.0
Nephritis, all forms 130-132	90	84	174	70.8	63.9	65.5
Diseases of the puerperal state 140-150	10	7	17	28.3	32.4	33.8
Puerperal septicemia 140, 142a, 147	5	3	8	13.3	5.7	11.3
Other puerperal causes 141-150 exc. 142a, 147	5	4	9	15.0	26.7	22.5
Suicide 163, 164	9		9	3.7	4.4	6.4
Homicide 165-168	6	22	28	11.4	11.6	12.0
Accidental deaths (exclusive of motor vehicle) 169, 171, 195	80	33	113	46.0	42.8	63.9
Motor vehicle 170	16	9	25	10.2	15.6	14.0
All other known causes	2099	140	349	142.0	129.8	138.2
Ill-defined and unknown causes 199-200	36	122	158	64.3	69.1	69.5

**Not available.

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific causes per 100,000 population; from puerperal causes, per 10,000 total births.

BOOK ABSTRACTS AND REVIEWS

A Manual of Surgical Anatomy. Prepared under the auspices of the Committee on Surgery of the Division of Medical Sciences of the National Research Council by Tom Jones and W. C. Shepard. Cloth. Price, \$5.00. Pp. 195, with 267 illustrations on 138 figures; 153 in colors. Philadelphia and London: W. B. Saunders Company, 1945.

This manual is the last of a series developed under the auspices of the Division of Medical Sciences of the National Research Council in order to furnish the members of the United States Army and Navy with a compact presentation of the necessary information used in the field of surgery, particularly in military surgery. This manual is prepared by two outstanding anatomical artists, Shepard and Jones, both men being well known throughout the field of medicine for their illustrations. Both men have prepared a previous manual used in World War I. The comments are that this one even supersedes their previous work.

This is a manual entirely of illustrations. All explanations are attached to the footnotes of drawings or are labeled directly upon the various anatomical parts. It follows the usual procedure as seen in anatomical works; namely, starting with the skull, the bony structures and then the viscera.

The drawings of the various structures of the head are very carefully done and beautifully illustrated. The various dissections which are used in the common surgical procedures are apparently drawn from the operative field. All of the sketches are pencil sketches. There are no photographs.

The authors have apparently drawn a great deal upon their previous publications and upon their illustrated anatomical works. The ability to draw, giving the impression of three dimensions, is accurately done, particularly so in the conditions of the chest. The illustrations are some of the best that the reviewer has seen.

To illustrate further the relationship of various organs, the authors have done cross sections and have labeled on the gross specimen where the cross section was taken, so that the exact relationship in an anterior-posterior direction can be determined.

There are apparently certain procedures in which they were particularly interested; for example, sympathetic block is illustrated rather profusely. The procedures for thoracotomy and pneumonectomy are well illustrated. The method of exposing the head of the humerus is demonstrated graphically and is very accurate. Various other bones are shown in the operative dissection for fractures, wiring, etc.

The index deserves some comment. It is different from the ordinary simple subject or author index. It is an explanatory index; that is, it takes each subject or anatomical region or organ and lists all the important things concerning that particular organ underneath it. It also includes the definition and in many cases the origin of the various muscles and their insertions. It is, therefore, more than an index indicating the page for the description; it is truly an explanatory index.

In glancing through the various subject matters it is evident that many things have been omitted, probably by the necessity of maintaining a small manual. The subjects included, however, are well done. Since it is to be used primarily in the military field, those subjects related to the exploration of foreign bodies in various muscle levels were supplied. The relation of foreign bodies to various nerve structures and blood vessels is also well illustrated.

The usefulness of this manual, however, to the surgeon in general practice or industrial practice is somewhat limited. It will serve an excellent purpose to Army officers in the field where a library is unavailable and time very short. Of course, the preface includes this statement: that it is primarily to be used in the field where time does not permit a thorough perusal of the literature or review of the larger anatomy texts.

Norman Van Wezel

Rypin's Medical Licensure Examinations: Topical Summaries, Questions and Answers. Revised under the Editorial Direction of Walter L. Bierring, M. D., F. A. C. P., M. R. C. P., Edin. (Hon.), Member, National Board of Medical Examiners and Secretary of the Federation of State Medical Boards of the United States. Fifth edition. Cloth. Price, \$6.00. Pp. 546. Philadelphia, London, Montreal: J. B. Lippincott Company, 1945.

With the collaboration of a review panel of nine educators in the field of medicine and "to assure the continued usefulness of this worthwhile publication originally written and revised three times by the late Harold Rypins, M. D.," the editorial direction of the present completely revised edition was placed in the hands of Dr. Walter L. Bierring, a member of the National Board of Medical Examiners. In the opinion of Dr. Bierring, "this book should interest both the examiner and the examinee and enlist the cooperation of the medical educator in the broad field of licensure and other types of qualifying examinations."

It is not likely that the time will ever come when even recent graduates will want to approach state board examinations without a review of at least the basic subjects—anatomy, physiology, chemistry and bacteriology—and perhaps the clinical ones also. This volume is designed to fill the need and seems to be adequate. Its eleven chapters, the first being *The Philosophy of Examinations* (a personal foreword to the candidate) should give the young physician fortitude and facts sufficient for him to qualify in his chosen field.

Douglas L. Cannon

Penicillin Therapy: Including Tyrothricin and Other Antibiotic Therapy. By John A. Kolmer, M. S., M. D., Dr. P. H., Sc.D., LL.D., L. H. D., F. A. C. P., Professor of Medicine, Temple University Medical and Dental School, Philadelphia. Cloth. Price, \$5.00. Pp. 302. New York: D. Appleton-Century Company, 1945.

This monograph is an attempt by the author to present in a digested form the pertinent facts

about penicillin. Most of the statements made are taken from the huge amount of literature that has come out on this drug. The book is introduced with a chapter on the development of antibiotics. This is followed by a complete discussion on production of penicillin, assaying of penicillin, physical and chemical properties and the antimicrobial activity of penicillin *in vitro* and *in vivo*, followed by a discussion of the pharmacology and toxicity of penicillin, along with administration and dosage. The major part of the book is devoted to the principles of penicillin therapy with individual discussion of its usefulness in many diseases. The discussion on its failure to cure many diseases is of equal value as the drug is not a cure-all. There is a short discussion on the other antibiotics such as tyrothricin, gramicidin S, streptothricin, patulin and chlorophyll. It is of interest that the latest reports on the failure of patulin to cure colds is included. The current discussion of the value of penicillin by oral administration is too recent to be included in this volume but the author puts emphasis on the fact that even though there might be concocted a way to beat the hydrochloric acid barrier of the stomach there will still be encountered the highly destructive enzyme penicillinase produced by the gram negative gastro-intestinal bacteria. Oral penicillin should be more effective after sulfaguanidine therapy if this reduces the intestinal bacteria flora but no reports have appeared on this combination. The author stresses the fact that often it is of great value to use penicillin and sulfa drugs together for they are synergistic. A warning has been given that might be well to remember which is the fact that penicillin therapy in gonorrhea might mask a chancre and thus result in inadequate leucic treatment.

This book is highly recommended for present day use not only for all of its valuable information but because of its large bibliography making this a reference work.

P. K. Burwell

Your Hair and Its Care. By Oscar L. Levin, M. D., Former Chief of Clinic and Instructor at Cornell University Medical College and Clinic; Chairman of the Eastern Medical Society, and Dermatologist to several New York Hospitals; and Howard T. Behrman, M. D., Former Vice-President of the Eastern Medical Society. Cloth. Price, \$2.00. Pp. 184. New York: Emerson Books, Inc., 251 W. 19th Street, 1945.

Men and women alike are interested in their hair but few are familiar with the scientific facts relating to it. In this volume two dermatologists of recognized standing discuss hair and its care in understandable language and deal with many problems, common and uncommon, such as dandruff, gray hair, thinning hair, care of the scalp, baldness, abnormal types of hair, excessive oiliness, hair hygiene, and the effects of occupation on hair.

Brief though the book is, it is authoritative and should be read with profit.

Douglas L. Cannon

Modern Psychiatry. By William S. Sadler, M. D., F. A. P. A., Chicago. Consulting Psychiatrist to Columbus Hospital; Consultant in Psychiatry, The W. K. Kellogg Foun-

dation; Fellow of the American Psychiatric Association; Member of the American Psychopathologic Association. Cloth. Price \$10.00. Pp. 996. St. Louis: The C. V. Mosby Company, 1945.

Sadler's book on psychiatry is from the beginning readable. Written in an airy style, evidently reflecting the vigor and enthusiasm of the author for understanding and treating patients who suffer psychiatrically, it makes interesting reading for the general practitioner. The teacher of psychiatry and practicing psychiatrists will, however, read portions of it smilingly and critically. It is a bit too loosely written. There is too great a departure from scientific accuracy. Important items are omitted. For example, in discussing physique in personality function, Kretschmer is mentioned twice but no reference is made of Sheldon's valuable contributions. Temperament is loosely touched upon in two paragraphs and yet one could not define temperament from the information given.

There is an evangelical tone to certain psychotherapeutic admonitions and a subtle, though perhaps unconscious, disrespect for the individual, as, when under the heading *Isolated Personalities*, he refers to "the rubes and hermits." Such references and attitudes would be frowned upon by the instructor of medical students who is trying to teach and impress upon them the need for the proper respect and understanding of all patients.

Again, let us state: it is readable, it is interesting, it contains some helpful information but it needs rewriting, reorganization and some deletions before it can be recommended as a scientific and authoritative text on psychiatry.

Frank A. Kay

Common Ailments of Man. Edited by Morris Fishbein, M. D., Editor of the *Journal of the American Medical Association* and of *Hygeia*, the *Health Magazine*, Chicago. Cloth. Price, \$1.00. Pp. 177. Garden City, New York: Garden City Publishing Company, Inc., 1945.

Sixteen articles that have appeared in *Hygeia*, the *Health Magazine*, constitute this interesting publication—articles that deal with the everyday ailments that claim no much of the time of physicians—headache, neuritis, arthritis, backache, varicose veins, anemia, constipation and hemorrhoids, to mention some of them. Each of the subjects has been dealt with by an authority and their authenticity is beyond question.

Physician, and patient too, will want to refer to the book often.

Douglas L. Cannon

Financial security for the tuberculous person who is hospitalized or whose employment is limited, has come to be a responsibility the public must accept, if control of the disease is the goal of the community. Over-crowded living conditions, poor home hygiene, and fear of want during the absence of the breadwinner from the home all contribute to failures of arrest of the disease in individual cases. Lack of attention to these social and economic factors results in the continued spread of the disease from uncontrolled open cases.—Herman E. Hilleboe, M. D., and Arthur W. Newitt, M. D., *Journal Lancet*, April 1945.

AMERICAN MEDICAL ASSOCIATION NEWS

PENICILLIN AND SULFADIAZINE VERY EFFECTIVE IN PNEUMONIA

STUDY BY SEVEN ARMY PHYSICIANS REVEALS RESPONSE FROM BOTH AGENTS IS ALMOST IDENTICAL; CUT DEATH RATE SHARPLY

Which is more effective in the treatment of pneumonia—penicillin or sulfadiazine?

Seven army doctors, reporting results of an extensive study in the August 25 issue of *The Journal of the American Medical Association*, said that the response from both agents was almost identical, the only difference being a more abrupt fall in temperature and fewer instances of spreading infection with penicillin.

"It is not to be inferred, however," the doctors said, "that penicillin and sulfadiazine are therefore of equal value in the treatment of all cases of pneumonia, for such is not the case. The patients on whom the study was made were vigorous, healthy young adults of whom treatment was instituted early.

"The important conclusion to be drawn, then, is that since adequate doses of either drug will produce an equally satisfactory and, indeed, almost identical response, the lower cost and greater ease of administration may make sulfadiazine the drug of choice in this group of patients. Once the problems of cost and administration are overcome, however, penicillin will be favored because of its lack of toxicity and the probability that penicillin resistant strains of pneumococci will be encountered rarely if at all, whereas with the sulfonamides resistant strains occur in two to six per cent of the cases."

The doctors, who made the study at the Regional Station Hospital, Fort Bragg, N. C., are Lt. Col. J. Murray Kinsman, Lt. Col. Worth B. Daniels, Capt. Samuel Cohen, Capt. Joseph P. McCracken, Capt. Constance A. D'Alonzo, Lt. Samuel P. Martin and Lt. William M. M. Kirby, all of the Medical Corps, Army of the United States.

Use of the two drugs has helped to bring about one of the striking achievements of military medicine, namely the reduction in the mortality rate of pneumonia from 28 per

cent during World War I to approximately 0.7 per cent during the present war.

The effectiveness of penicillin and sulfadiazine in pneumonia treatment can be seen from the fact that of the 255 patients concerned with the study, there were no fatalities.

The doctors believe that patients seriously ill with the disease should be treated with penicillin because of its greater action against the pneumonia germ.

"From the dramatic results obtained in isolated cases," *The Journal* article said, "there is every reason to believe that the mortality rate of 6 to 10 per cent in civilian hospitals with the sulfonamides may be significantly reduced by penicillin."

In studies to determine the smallest amount of penicillin that could be used effectively in the treatment of pneumonia, the doctors found that 10,000 units injected into the muscle four times daily for three days produced cures in every instance, but with smaller doses there were relapses and failures to respond to treatment.

WAR ENDS WITH MANY PROBLEMS STILL FACING AMERICAN MEDICINE

"War's end finds many, many questions of vital interest to American medicine as yet unsettled," says the August 25 issue of *The Journal of the American Medical Association*. The *Journal's* editorial follows:

"Suddenly the war ended. Men and women were mostly jubilant; some sorrowful; some even apathetic, with a feeling of exhaustion. The control over gasoline was removed; almost immediately roads were overwhelmed with traffic. Along the curbs stood motor cars with tires that burst or springs that cracked or engines that stuck—reminders that motoring will have to await a return to normalcy. So also with human beings—the stresses and strains of the war reveal themselves in a variety of inadequacies—combat neurosis was not limited to the military services.

"The end of the war in Europe brought to the headquarters of the American Medical

Association a veritable deluge of letters from medical officers urging that steps be taken at once to insure their instant separation from the service. Occasionally a wife wrote saying "You got my husband into this; now you get him out!" . . .

"The wounded are still coming home. For maximum recovery the armed forces carry the wounded to centers where they receive the attention of specialists. The Army Medical Department has already indicated that replacements for what the Army calls 'scarce specialists' are not available.

"War's end finds many, many questions of vital interest to American medicine as yet unsettled. The supply of medical and pre-medical students; the disposal of Army and Navy surplus medical supplies; a proper organization and system for medical services to veterans; the maintenance of intensified coordinated research; the redistribution and relocation of returning medical officers; the provision of adequate numbers of residencies in the specialties; the development of medical care in the areas of occupation; the reestablishment of interchange of medical information throughout the world—these are but a few of the many problems that demand prompt consideration, careful planning, possible solution.

"Much proposed legislation affecting medical care in postwar America is already before the Congress. New measures tremble in the minds of Senators and Congressmen and in the thoughts of personnel in governmental agencies who seek new fields to conquer. The Office of Defense Transportation relaxed to the extent of permitting groups of 150 individuals to attend conventions. Such relaxation does not, however, permit the assembling of the House of Delegates of the American Medical Association. Yet an early meeting of this body is desirable so that the policies of the Association regarding many problems may be established through its democratically selected official group.

"These are truly, even as in war, times that try men's souls. Scientifically minded physicians will realize that now, even as in war, haste must be made slowly. With sympathetic understanding, with the determination to see the job through to its fortunately happy ending, with the resolve to

sink individual desires just a little more for the common good, let us practice more forbearance, so that our world may be that much sooner again a well ordered civilization."

NEW STUDY SHELVES OLD THEORY THAT DYES CAUSE SKIN TROUBLE

PHYSICIANS FIND THAT IN MOST INSTANCES DERMATITIS CAUSED BY FINISHES WHICH GIVE FABRICS BETTER APPEARANCE

Many people, especially women, believe that painful and itching skin irritations which they sometimes suffer are caused by dyes in wearing apparel. But two physicians, writing in the August 25 issue of The Journal of the American Medical Association, state that dermatitis or skin inflammation due to fabric dyes is relatively infrequent today.

"It has been shown that in most instances the dermatitis was caused by the finishes rather than by the dyes," the doctors report. Finishes are placed in fabrics to give them a better appearance such as luster, better feel and wearing properties, to prevent runs and unraveling, and to make fabrics noncreasing, waterproof, mothproof, flameproof and moldproof.

The doctors who report their study in The Journal are Louis Schwartz, Medical Director, and Samuel M. Peck, Senior Surgeon (Retired), both of the U. S. Public Health Service, Bethesda, Md.

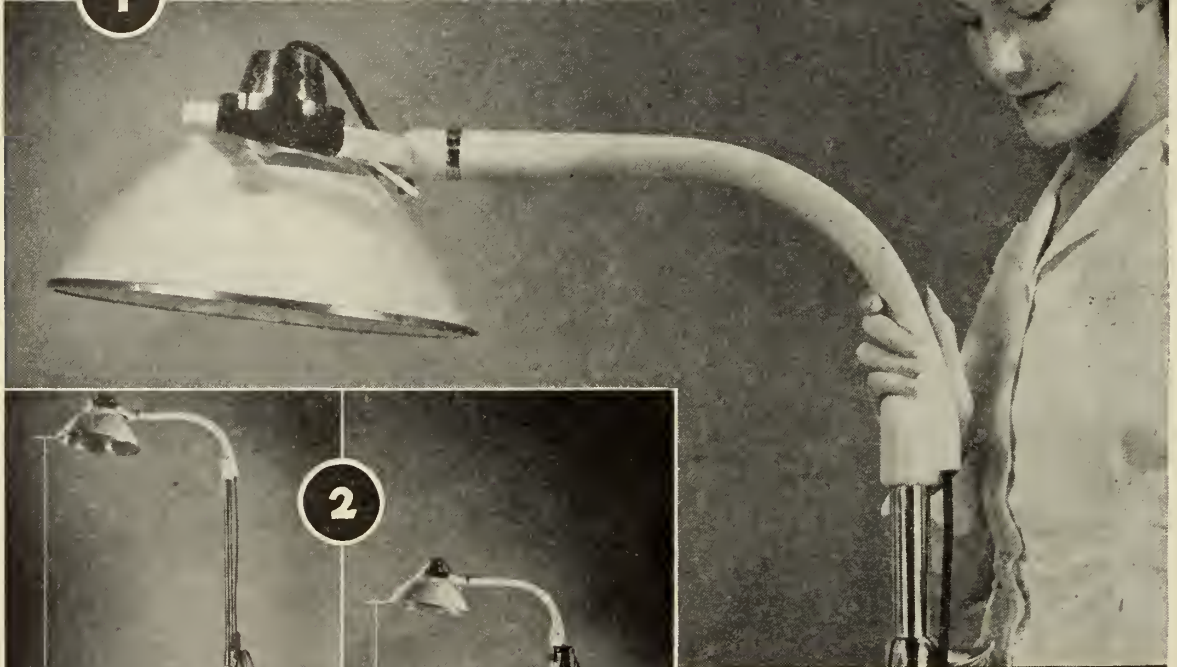
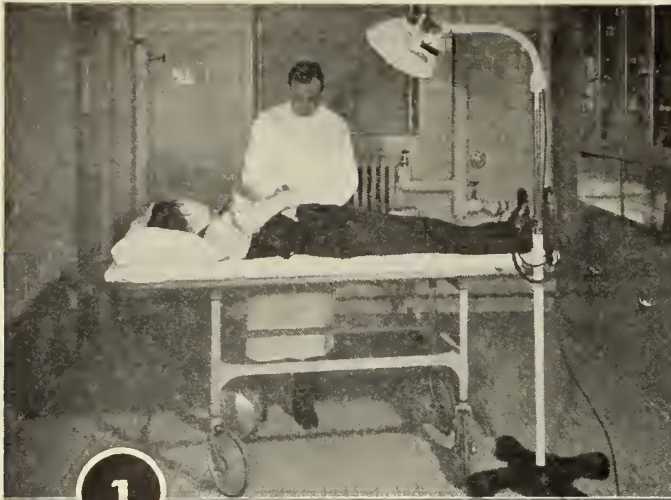
The two authors point out that "when dermatitis is caused by the dyes, it is usually due to an idiosyncrasy to the dye itself or to a faulty process of dyeing, so that there is retained in the fabric some chemical which should not have been present. On occasion dyes will cause dermatitis if one of the known sensitizing dyes is used. When dyes themselves have been found to be the cause of the dermatitis it has been usually found that they are easily come out of the fabric or 'bleed.' Conditions on the skin surface may help to determine the 'bleeding' of the dyes from the fabric. For instance, some will bleed out in acid perspiration and others in alkaline. Since some of the dyes are soluble in fat solvents, a high fat content on the skin surface may help dissolve them out."

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of

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BACKGROUND

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No. 4

ALABAMA DOCTOR

WILLIAM H. BRANTLEY, JR.
Birmingham, Alabama

FOREWORD

Governor Chauncey Sparks, speaking to the Legislature, said: "Alabama once had a four year medical college . . . We now have a two year course . . . it is highly desirable that the two year course be increased to a four year course. I recommend to the Legislature a conditional appropriation for the construction and operation of a four year medical school in Alabama."¹

The Governor was not indulging in political talk. He was in dead earnest and determined that Alabama should have a medical college of her own, modern in every respect and in keeping with the extraordinary progress of the medical profession.

The Legislature responded to the recommendation of the Governor and the desires of the people by establishing a four year medical school within the State, to be known as "The Medical College of Alabama," a school of medicine of the University of Alabama.²

Reprinted from the July 1945 number of The Alabama Lawyer, by courtesy of the author.

An Alabama medical review from the earliest times to the late present, presented from the legal and historical viewpoint; together with references to Acts of the General Assembly and decisions of the Supreme Court; to which is appended a Note containing information usually not conveniently accessible to physicians and laymen.

The first of two installments. The concluding part will appear in November.

1. Message of Governor Chauncey Sparks to Alabama Legislature—Acts 1943, p. XXVI.

2. Acts of Alabama 1943, p. 89.

This law, creating a four year Medical College, was not the result of a stroke of genius, but came about because of hard and persistent effort which began as far back as 1928. The Alumni Associa-

In the same law, the legislators, with deliberation, purposely placed the new Medical College in the hands of educators for administration and within the authority of the medical profession for guidance. Although the appropriation was large enough to interest those who have a taste for juicy political plums, the men who enacted the law, in so far as possible, took the College out of and above partisan politics.

A million dollars was provided with which to acquire land, erect buildings, and equip the school. An additional \$25,000.00 was appropriated to pay the expense of the Building Commission. For maintenance the Legislature gave the College \$366,750.00 a year for the years 1944 and 1945. The men who created this College not only wanted it to be well-born, but that thereafter it not be undernourished. They were guided by the conviction that Alabama is not rich enough to afford an inferior medical school.

tion of the Medical Department of the University of Alabama appointed a standing committee in 1938 composed of Drs. W. D. Partlow, J. P. Collier, E. V. Caldwell and S. A. Gordon, whose objective was a four year medical college. Later, the Medical Association of the State took over this work and Drs. S. L. Ledbetter, B. F. Austin, John H. Blue, Emmett B. Frazer, P. P. Salter and A. M. Walker were added to the Committee. The work of these men, together with the unrelenting efforts of Dean Stuart Graves of the University Medical School, is largely responsible for producing the political interest and public desire which resulted in the creation of the four year Medical College of Alabama. The final push toward success in the campaign was a strong appeal to the Medical Association, at its Montgomery meeting in 1942, by President J. M. Mason, M. D., "to bring to bear its great influence in obtaining a four year school."

As medicine in Alabama confidently goes forward, it is not amiss to throw a glance backward over our shoulders. What experience guided these educators, political men, and physicians in their deliberations? Upon what rocks of wisdom is the new house built? How have the citizens, the state government and medical men managed such matters in the past? What laws have controlled them and what traditions influenced them? Whence came this million dollar Medical College?

FROM THE EARLIEST TIMES

When Alabama was admitted into the Union in December, 1819, it had no constitutional provisions or laws governing the practice of medicine or surgery. There were two feeble "health laws" inherited from the Mississippi Territory, one to guard against "the plague, yellow fever, small pox, or other contagious disorder,"³ and the other "to prevent the sale of unwholesome liquors and provisions."⁴ This latter law required the baker to have his "surname and the initials of his Christian name legibly marked on each and every loaf, cracker, cake, piece," etc., or suffer a penalty.

This was all. The State was virgin territory and wide open for anyone to practice surgery or medicine regardless of learning, training or experience. Anyone could offer for sale as medicine any concoction he might compound or brew and, along with it, or without, his services as surgeon or physician.

This state of affairs was as unavoidable as it was undesirable. The misfortune was obvious and yet it could not be escaped because the situation created was a natural by-product of the rapid settlement of a new state. The immigrants into new country usually are those unselected persons who have the least to lose by seeking new homes or new fields of endeavor. Those who are established and successful at home rarely become pioneers in raw frontier country. The members of professions are even less inclined toward change than those engaged in farming or business.

This slowness to migrate on the part of settled and qualified doctors accounts for the fact that in Alabama in those first years

there were more imposters and charlatans purporting to treat and heal human ailments than there were physicians of learning and experience properly engaging in the practice of their profession. If this evil was to be cured, the quality doctors would have to do it—the others were satisfied, and the people were not wise enough.

But while not wise enough to achieve success, the first demand in Alabama for a statute to regulate the medical profession stemmed straight from the people. It came through the medium of the spectacular and romantic Indian fighter, scout and trapper, Sam Dale, who, as Representative from Monroe County, presented to the House in its first session at St. Stephens, "the petition of sundry inhabitants of Monroe County praying the establishment of a Board of Physicians to examine and give License to applicants in their profession."⁵ The petition was referred to a committee which a few days later, without taking any action, requested to be discharged from further consideration of the matter. The first effort to regulate the medical profession in Alabama by statute had failed. But success was to come later when the leading physicians of the State supported the proposed law.

Among Alabama's pioneer physicians were a number of very able and high class men.⁶ Fortunately, they were fairly well distributed over the State. These men recognized the need for action, and also possessed the qualities of leadership necessary to get successful results. Their leader was Dr. Robert Chambers,⁷ of Madison County. Associated with him were Dr. Thomas Fearn also of Madison, and Drs. Clement Billingslea of Montgomery County, and Richard Inge and Robert L. Kennon of Tuscaloosa. Through the influence of these men and others who worked with them, the need for immediate regulation of the practice of medicine by law was presented to the General Assembly. The Governor and the

5. House Journal—1st Session—Territorial Assembly of Alabama—February 1818, p. 47.

6. William Wyatt Bibb, first Governor of Alabama, was a physician.

7. An able doctor, a member of the 1819 Constitutional Convention, a member of the Alabama House of Representatives, and elected United States Senator from Alabama, only to die while en route to Washington to be sworn in.

3. Toulmin's Law of Alabama, p. 688 (1807).

4. Toulmin's Law of Alabama, p. 690 (1815).

Assemblymen were aware of the need of some legal control over such a grave problem. The result was a law "To Regulate the Licensing of Physicians to Practice, and for other purposes therein named."⁸

The outstanding principle embodied in this law was that of awarding local control over their profession to the members of the profession in their several communities. This principle, subject to some changes and adjustments in order to meet the shifting conditions of the times, has been the bedrock of the regulation of the medical profession in this State for over one hundred and twenty-one years, meeting and surviving every challenge presented against it.

This statute, known as the "1823 law," created five Medical Boards and located one in each of the five leading communities of the State at that time, namely, Huntsville, Tuscaloosa, Cahawba, Claiborne and Mobile. These boards were given the power to examine applicants and issue licenses to practice physic and surgery. Excepted from the provisions of the law were those engaged in the practice of medicine or surgery prior to enactment of the law, provided such persons applied to the Board and had his name enrolled within nine months after the law became effective. It is submitted that, under the circumstances then obtaining, this was a wise and practical thing to do. The law also excepted those who had received a diploma from a regular constituted medical institution within the United States, if such diploma holder shall have been engaged in the practice of medicine within two years previous. Fees collected for the examination of applicants were required to be used for the purchase of a medical library for the use of the medical board.

The General Assembly, in joint session, elected the first boards. Thereafter, any vacancies were to be filled by the remaining members of the board in which the vacancy occurred. It was therefore of the utmost importance that good men be chosen as members of these first boards. The Assembly having delegated by law to the medical profession high responsibility, it was simple fairness that the Boards have authority commensurate with their duties. A grant of power should always be serious and important business in a democratic state.

8. Acts of Alabama 1823, p. 45 (Dec. 22, 1823). For a long time known as the "1823 law."

The election of the board members was not only serious business, it presented an interesting and picturesque scene. The fifth annual session of the Assembly was drawing to a close. Night sessions were necessary in order to complete the business on hand before the date already set for adjournment. On Christmas Eve, 1823, the Assembly convened in joint session in the hall of the House at 7:00 o'clock. The room was lit by candles, but in the large, open fire place at the end of the hall a bright fire from fat pine kindling kept off the chill of the evening and aided in illuminating the chamber.

Far from their homes, and completely isolated from their families, these pioneer legislators left the inns, taverns and tippling houses, hurried through the darkened streets of Cahawba, to the Capitol, so as not to be too late to the Medical Board election, the only business of the evening session. Certainly on Christmas Eve the occasion was one of conviviality and high cheer. Many drinks had been drunk and toasts said since the afternoon adjournment, for your Alabama pioneer was a lover of hard liquor, but when the Assembly was called to order the assemblymen promptly left their cozy positions by the fire place and sixty-nine answered the call of the roll, anxious to do the best they could for the people and the profession.

The Huntsville Board was elected first. There were three nominees, Drs. Henry Chambers, Thomas Fearn and Young A. Gray. They were elected unanimously. The same situation prevailed in electing Dr. William Purnell, Robert L. Kennon and Richard Inge for the Tuscaloosa Board.

There were eight nominees for the three places on the Cahawba Board. The names submitted were Drs. Clement C. Billingslea, Wheeler Randall, Daniel Long, Edward Gantt, James Kelly, Edward Vasser, Thomas O. Meux and John H. Miller. Drs. Billingslea and Randall received substantial majorities on the first ballot. The run off was between Drs. Meux, Gantt and Miller. Dr. Meux was the victor.

Claiborne produced five candidates, Drs. John Bonner, John Watkins, William H. Stewart, James Simpson and Joshua S. Wilson. The first ballot elected Drs. Bonner, Watkins and Stewart.

Mobile was last with four men nominated for places. They were Drs. Thomas L. Carthy, Elias Roberts, Solomon Mordecai and John B. Cumming. The first three were elected. The Senate withdrew to its own hall. Separately, the houses adjourned until Friday, December 26, 1823.⁹ Henceforth the destiny of the medical profession in Alabama was to be within the guidance of its own members.

Changing conditions required changes in the law. Selma was growing in size and influence. Cahawba declined following the removal of the Capitol to Tuscaloosa, after the 1825-26 session of the Assembly. So the "1823 law" was amended, making the place for holding the Medical Board for the district of Cahawba at Selma. Another amendment gave the fees chargeable by law to the members of the Boards for their services. Still another amendment provided that when a vacancy occurred a quorum of the Board could fill the vacancy until the next meeting of the General Assembly, when the vote of both Houses would elect a member to fill the vacancy.¹⁰

Further changes were made by the 1829-30 Assembly. The Mobile Board lapsed and was abolished.¹¹ The membership of the remaining boards was increased from three to five. Fees were increased. A license signed by a Board member was made legal proof in court of the authority of the person to whom issued to practice. Each board was required annually to give to the other boards the names of the persons licensed by them.¹²

New Board members elected by the Assembly, following the law increasing the

9. Senate Journal, 1823, pp. 136-139.

Note: On December 29, 1823, by joint resolution, the Assembly ordered the Speaker of the House to certify the names of the persons elected to the Medical Boards to the Governor, and made it his duty to issue a commission to each elected member. The resolution also made it the duty of the Governor to issue a commission to those hereafter chosen by Board members, upon the certificate of the members making such appointments. Acts of Alabama 1823, p. 119.

10. Acts 1827, p. 97. On January 30, 1839, the Medical Society of South Alabama was incorporated and made the Medical Board at Selma. This was the official end of the Cahawba Board. Acts 1838, p. 52.

11. The Mobile Board was later revived. Acts 1830, p. 13.

12. Acts 1829, pp. 11 and 12.

number of members, were: Huntsville, Drs. Edward Pickett, Richard L. Fearn and Alfred Moore; for Tuscaloosa, Drs. Doric S. Dall and Zacariah Meriwether; for Selma (Cahawba) Drs. Asa Hoxey and Peter W. Herbert; for Claiborne, Drs. Joshua S. Wilson, John W. Moore and Henry E. Curtis.¹³

The Medical Boards were not always friendly to the group practicing what was called the Botanical System of Dr. Samuel Thompson—sometimes called the Thompsonian System. In the year 1823, evidently as a result of some friction between the Thompsonians and the medical fraternity, the Assembly amended the 1823 law again, permitting the Thompsonians to practice their system and collect pay for it without being licensed by the Boards. "But," said the amendment, "if said Thompsonian practitioner bleed, apply a blister of Spanish flies, administer calomel or any of the mercurial preparations, antimony, arsenic, tartar emetic, opium or laudanum," then he was subject to the penalties of the law.¹⁴

At the time of the creation of the first Medical Boards in 1823, the Assembly contemplated the need for others from time to time as the population of the State increased. These prospects began to mature in 1835 when Boards were created for Montgomery and Demopolis.¹⁵ Thereafter, for many years, there was a steady increase in the number of boards and also in the number of physicians practicing within the State.

The Assembly soon found the business of electing the board members to be both cumbersome and burdensome. To avoid these difficulties, the device of naming the mem-

13. House Journal 1829, p. 273.

14. Acts 1823, p. 5. The newspapers of the day were also opposed to the Thompsonians. In 1837 the Selma Free Press reported: "A Dr. Rossum, a reformer, came to town proposing to cure all kinds of diseases, in a few minutes by 'sweating and hot water'—the Thompsonian System—and created quite a sensation by his wonderful cures of chills and fevers; but one day having steamed one of General Brantley's negroes a little too much the negro died while under the blanket; we heard no more of curing chills and fever in that way for some time after, Dr. Rossum having changed his residence." (Hardy's History of Selma, p. 22.)

15. Acts 1834, p. 13.

bers of the board in the Act creating it was employed with satisfactory results.¹⁶

Through these early years there was hardly a "sickly season" that did not claim some victims for the unrelenting enemy of man, "yellow jack," or yellow fever. In 1839 the disease reached the proportions of an epidemic, especially in the seaport city of Mobile. The General Assembly wanted to do something to combat this annually recurring curse but did not possess the knowledge nor the means required to deal with it. Several learned and courageous doctors from Mobile came forward with a concrete plan. These men were Drs. Henry S. Levert, Josiah C. Nott, Solomon Mordecai and John H. Woodcock. They asked a charter from the Assembly for the Mobile Medical Society, giving it the powers of the Medical Board at Mobile, and also that "the Society be required to carry into effect such ordinances as the corporation of the City of Mobile may adopt in regard to it" . . . "to organize a Board of Health and procure necessary information and advice upon the subject of the health of the city, and the precautionary measures necessary to preserve the same."¹⁷

This action on the part of the Mobile doctors is believed to be the first partnership between the medical profession and the State to protect the public through the legal device of a Board of Health.¹⁸ Needless to say, the State government was relieved to

have this responsibility in the hands of such competent and fearless men.

The development of the profession of dentistry in the State required some form of governmental control and regulation. The Assembly attempted to solve the problem by enacting a law which required the Medical Boards to examine and license, where qualified, applicants to practice dental surgery. It was further provided that "where practical" the Board add to its body, by election as a member, a professional dentist.¹⁹ This plan evidently did not work as smoothly as was contemplated, or at least this was true in some instances, for in 1850 the Assembly by its own direct Act, and without the consent or concurrence of the physician members, placed James W. Simmons on the Talladega Medical Board with authority to examine applicants who applied for license to practice dental surgery.²⁰

The members of the medical profession in Selma were dissatisfied with the charter which had been granted the Medical Society of South Alabama. A new charter was procured for the Alabama Medical Society.²¹ In addition to the functions of the Medical Board, which were bestowed upon the new corporation, it was given the significant power "to grant diplomas and to exercise such other powers as are incident to institutions incorporated for the promotion of medical sciences." The law provided that the members of the Society shall be known and styled "Fellows of the Alabama Medical Society."

These innovations were not mere pretense on the part of the Selma doctors. They were among the most learned and progressive men in the State. Someone had in mind a medical college, or some sort of institute for instructing students, or perhaps even a postgraduate course for the doctors already active in the practice. But for some unknown reason the Alabama Medical Society at Selma seems not to have proceeded with the idea to the extent of actually granting diplomas.

The Medical Boards were fairly efficient in policing the practice of medicine over the State, but, as always, there were some men who would not comply with the law and at

16. A note is appended to this paper giving the citation of the legal origin of each Board and the names of its first members. The information is not essential, but it may be interesting to members of the medical profession.

17. Acts 1841, p. 74 (Dec. 21, 1841).

18. Yellow fever had been the curse of Mobile since the days of Bienville. In 1839 there were 450 deaths from the fever. Those who could afford it left the city before the beginning of the "sickly season." Others stayed on in fear, or fled at the last moment. It was during the 1839 epidemic that the "Can't Get Away Club" was organized in Mobile as a local relief society modeled after the Red Cross of Geneva. Through the years until 1897 the Club was really the "Won't Get Away Club," in that its heroic members declined to flee their city and were ever ready with doctors, medicines, food and nursing for the stricken and suffering. Many fine doctors lost their lives while engaged in attending those afflicted with the disease. In 1843 there were 750 deaths. In 1853 about one-third of the population fled the city and of those who remained 1,191 died from the yellow fever.

19. Acts 1841, p. 23 (Dec. 31, 1841).

20. Acts 1849-50, p. 427 (Feb. 4, 1850).

21. Acts 1841 Called Session, p. 14.

the same time were able to profit by illegal practice. These poachers in the field of medicine were brought out into the open or forever driven from practice by the happening of two events, one medical and the other legal.

The first, the medical event, was the organization of the Medical Association of the State of Alabama, which took place in Mobile on December 4, 1847. By the time the Alabama General Assembly had convened for its first session in Montgomery on December 6th, the word was beginning to travel around that the new Society would be a powerful force in controlling the practice of medicine. Before the Assembly adjourned on March 6, 1848, several men, who feared both the laws already in effect and the probable influence of the new State Association, asked and received special dispensations from the legislature. Jesse Tyre, of Walker County, was by special act permitted to practice botanic medicine without a license,²² and Abram Anderson, of Monroe County, George Washington Yarbrough, of Talladega County, and John T. Henderson, of Butler County, to practice medicine without licenses.²³ The law requiring licenses had been in effect for a quarter of a century, and this is the first time the legislature had sabotaged the medical profession.

The legal occurrence which seems to have had particular effect upon the medical practice was the adoption of Alabama's first Code, which became effective on February 5, 1852. The Code had been in course of preparation for two years, and of course was not an unexpected change in the law of Alabama. By a very simple provision it contained in force the Medical Boards and Societies already established by law.²⁴ But there were those who were concerned about the effect of the change in the law on their activities. They were ready and waiting with special acts by which the Assembly granted to them the right to practice medicine without licenses. These privileged few were Elijah Osborn in Montgomery County, J. Millford Randall in Fayette County, Stephen A. Kersey in Pike County, William H. Allen in Jackson County and John B. Callahan in Tallapoosa County.²⁵

The new Code, by merely stating that the Chapter on "Physicians" did not apply to them, put the Thompsonians in a sort of predicament. In effect, it said that those of this order were not physicians. This did not satisfy the botanic men. At the next session of the Assembly they presented to the Assembly a law of their own drafting, and it was passed and became effective on February 15, 1854. This law provided for the creation of boards in each county, composed of not less than three nor more than five Thompsonian or botanic doctors with power to examine and license applicants who wanted to practice the Botanic System.²⁶ These boards were to be selected by the Judges of Probate and Commissioners of Revenue in their respective counties. The Thompsonians were now free and independent—they had an order of their own, and were recognized and governed by a law of their own, but they failed to survive. This group seems to have reached the top of its popularity in 1856 when the Assembly created a "Board of Botanic Physicians for the State of Alabama."²⁷ Their last political effort seems to have been a charter for the "Blount County Medical Board of Botanic Physicians."²⁸ The Assembly used the word "medical" in the name and style of this botanic board, but this is apparently the only instance where this was done.

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA IS FORMED

Those individuals who sought and gained exception from the operation of Alabama's rather mild laws regulating the practice of medicine were thinking primarily of themselves. They evidently had small affection for the profession and little regard for the public. But the activities of this small minority, together with the realized need of a central responsible body representing the profession, hastened the coming of the State Medical Association.

There were in the State many doctors who looked upon the practice of medicine as something more than a professional means of earning a living. These men recognized that the large confidence reposed in them by the people for the simple reason that

22. Acts of 1847, p. 394.

23. Acts of 1847, p. 393.

24. Code 1852, Sect. 971.

25. Acts 1851-52, p. 487.

26. Acts 1853-54, p. 58.

27. Acts 1855-56, p. 72. (See note appended for names of members.)

28. Acts 1859-60, p. 450. (See note appended for names of members.)

they were doctors created a corresponding duty which only the most zealous physician could hope to fully discharge. Such a position of trust demanded more than the individual could give. Some collective body to answer for the profession to a trusting and dependent public, which would also serve as an effective means of controlling and directing the individual practitioner, was necessary. This instrument was found in the Medical Association of the State of Alabama.

Dr. A. G. Mabry, a leading physician of Selma, invited a number of Alabama physicians to meet with him in the City of Mobile on December 1, 1847. The announced purpose of the gathering seems to have been to consider the formation of a program for hospitalization of the insane by the State. The group organized itself into a convention with Dr. W. B. Johnson, of Perry County, as President.²⁹ During the course of its discussions, a committee of seven was created to prepare a plan for a state wide medical association.³⁰ On December 4th the Committee reported. Upon the adoption of their report, the convention resolved itself into the Medical Association of the State of Alabama.

For the first few years of its existence the Association functioned as an unincorporated society. The members gradually came to the conclusion that a charter from the Assembly would stimulate interest among members of the profession over the State and also strengthen the internal organization of the Association. A charter was asked of the Assembly and on February 13, 1850, the Medical Association of the State of Alabama was incorporated.³¹

During the middle years of the nineteenth century the Black Belt section of Alabama reached its greatest prosperity and widest

influence in the State. Barriers to transportation cut off the progressive Tennessee Valley section from the rest of the State to the extent that its people were handicapped to attend gatherings in Montgomery, Selma, Mobile and other South Alabama cities. This physical obstacle was reflected in the membership of the Medical Association. It was dominated by men from the Black Belt. Most of the members were brilliant and scholarly men, but they do not seem to have been gifted in business management. The Association was constantly in financial difficulties. Somehow these were overcome or adjusted, and annual meetings were held from the date of organization in 1847 until 1855 when they were discontinued.

The papers and orations delivered at these annual conventions showed their authors to be industrious and scholarly men. Many of them had studied in Europe, especially in Paris, where they had received instruction from and had opportunities to observe the world's leading members of all branches of medicine and surgery at work. Men with such broad culture did not hesitate to express their own opinions nor to recount their own experiences in the treatment of disease, whether the results were fortunate or not. It is regrettable that these able and experienced men permitted their society to cease functioning. It is possible that the devastation of yellow fever during 1853 and the following years placed such a heavy additional burden on the profession that they could not meet the calls made upon them and at the same time maintain the Association. It is certainly true that the section where the fever was most prevalent was also the section which had furnished the largest portion of the active membership of the Association.

As soon as they were able to do so after the end of the bloody War Between the States, the surviving members of the Society, together with other energetic physicians, revived the State Association. The reorganization meeting was held in Selma in March, 1868.³² Only six of the pre-war members were present. They were: Drs. H. Backus, C. J. Clark, F. A. Ross, A. J. Reese, W. P. Reese and A. G. Mabry. The war had taken its toll of Alabama doctors.

29. The other officers were: R. L. Fern, M. D. of Mobile, First Vice-President, A. G. Mabry, M. D. of Selma, Second Vice-President, Secretaries George F. Pollard, M. D. of Montgomery, and W. B. Crawford, M. D. of Mobile. George A. Ketchum, M. D. of Mobile, was elected Treasurer.

30. The members of this Committee were: Drs. P. H. Lewis (Chairman), Morgan, Barnes, Miller, E. J. Gaines, George A. Ketchum and John H. Woodcock.

31. The incorporators were N. L. Meredith, Thomas W. Mason, J. A. English, T. A. Bates, W. B. Johnson and H. M. Jackson. Acts of Alabama 1849-50, p. 315.

32. Owen's Bibliography of Alabama, p. 1047.

Following its reorganization, the Medical Association grew steadily and surely. The election of Governor Lindsay in 1870 encouraged the belief that the day of freedom from the government of usurpers was not far away. The doctors began to prepare for that day of deliverance. A movement was started at the 1870 meeting to amend the Association's Constitution. Opposition developed which continued each year until the annual meeting in Tuskaloosa in 1873, when the proponents of the radical amendments were almost completely successful. Alabama now had a Medical Association built on a solid yet elastic foundation.

The new constitution provided for a President, two Vice Presidents, a Secretary, a Treasurer and ten Censors. All of the offices called for work from the incumbents and considerable personal sacrifice in time and money. The President was given general supervisory authority over the affairs of the Association. The two Vice Presidents divided the State—north and south—between them. Their chief duty was to see that the county boards functioned efficiently.

A distinctive feature was the Board of Censors. These were chosen from the members of the "College of Counsellors." The Censors in fact serve as a general executive committee of the Association. Great power was laid in their hands.

The "College of Counsellors" was formed of old dependables who were steeped in the traditions of the profession and who had been tried in the work of the Association and found not wanting. The active members of this group cannot exceed one hundred. The position of counsellor once achieved is intended to be permanent. All officers of the Association, except the President and the Vice Presidents, are chosen from the rolls of the counsellors.³³ As they

33. The original plan of organization, as conceived and put into operation by Jerome Cochran, M. D., outstanding leader of the profession in the years following Reconstruction, provided that only counsellors could hold office. The famous McAdory Resolution, providing that all members of the State Association who have been in good standing for five years be eligible to any office within the Association, was adopted in 1922 but limited the offices that could be held by members to those of the presidency and the vice presidencies; and Drs. Parke, Wilson and Riggs lost their case in court (204 Ala. 455, 86 So. 28) to liberal-

are greatly honored likewise they must labor for and support the Association.

The State Association is made up of the affiliated county societies, each of which holds its charter from the mother chapter—the State Association. The local county chapters are arranged along the same lines as the central State Organization.³⁴

On November 24, 1874, the homefolks recovered political control of the State by placing George Houston in the governor's chair and also winning a majority in both houses of the Assembly. The Medical Association already had its own affairs in order and was ready with a program to present to the Legislature.

That body was cooperative. Very promptly the proposals were written into a law,³⁵ which constituted the State Medical Association as the Board of Health of the State of Alabama, with authority and control over county boards, the county medical societies being given the duties and powers of County Boards of Health.³⁶ Here was finally

ize the Association and make it more democratic. The changes which have been made in the Constitution and laws of the Association have been by the doctors themselves, without the coercion of the Legislature or orders from the Courts.

34. In 1893 the charter of 1850 was confirmed and the provisions of the Constitution of 1873 made effective by the General Assembly (Acts 1892-93, p. 267). The men who procured the passage of this law and took the responsibility for it in their own names were James Thomas Searcy, President, Jacob Huggins, Senior Vice President, Barclay Wallace Toole, Junior Vice President, Thomas Alexander Means, Secretary, Walker Clarke Jackson, Treasurer, and Jerome Cochran, George Augustus Ketchum, Edward Henry Sholl, Miles Scott DuBose, John Brown Gaston, Samuel Dibble Seelye, William Henry Sanders, Charles Whelan, Charles Higgs Franklin and Benjamin James Baldwin.

35. Acts 1874-75, p. 130 (Feb. 19, 1875).

36. This was the Mobile plan of 1841 applied to the whole State. In 1901 the Supreme Court said: "This Board of Physicians were, in fact, constituted the medical advisors of the State" . . . "At this writing to this Board is entrusted largely the enforcement of all laws relating to public health, quarantine and sanitation." *Tyson, J. in Bragg v. State*, 134 Ala. 165 at 179. By an Act of the Legislature, approved September 29, 1919, the Board of Censors of the County Medical Society, rather than the Society as a whole, was constituted the County Board of Health. The Court also held in "*The State vs. Sanders*," 187 Ala. 79, that the State Health Officer was an officer within the meaning of Section 281 of the Constitution, and consequently his salary could be increased or decreased during the term for which he was elected or appointed.

achieved complete coalescence of private skill and initiative with legal authority and control in such a manner as to preserve the best qualities of both.

The provisions of the Association's Constitution were strong enough and yet sufficiently elastic to make the administration of the 1875 law a great success. But the leaders of the Medical Association were not done. As soon as they were organized under their new constitution—even before the 1875 law was enacted, they were at work drafting a bill to regulate the practice of medicine. When the Assembly convened in 1876 the Censors had their bill introduced. It was such a strong law that opposition developed in the House and a minority report against the bill was filed, in which it was charged that the bill was "totally incompatible with the genius of American freedom and the principles of the Constitution of Alabama."³⁷ But the opposition soon wilted and the bill was enacted. It was approved by the Governor February 12, 1877.³⁹

The law was written so as to include all legal doctors regardless of name or school on the same footing, no sectarian differences being acknowledged. The local boards were given the power to conduct examinations for admission to practice, but the State Association retained the power of supervision.³⁹ This is one of the strong points of the law. The local boards remain in effect the policemen for proper administration of the law and at the same time are alert to the ethics of the profession. An excellent combination of values was achieved, standards were fixed and given practical medical and

legal support without impairing functioning capacity.

SCHOOLS OF MEDICINE IN ALABAMA

The people of Alabama have been fortunate in having so many able and honorable men practice the profession of medicine within her borders. The public has benefited from the alliance of the powerful and sensible Medical Association and vigorous boards of health. The sovereign has given the profession the laws it has asked, and has cooperated in public health programs through decisions of its courts and effective action by enforcement officers.

But in the important special field of medical education the State has failed in the past to measure up to its responsibilities. Perhaps it has not always been the fault of the sovereign that so many of our young men received all or part of their fundamental medical instruction and training in other states. There are valid explanations. The leaders did not overlook this need and made attempts from time to time to meet it, but most of these efforts were failures.

Although the Assembly gave the Alabama Medical Society at Selma the right "to grant *diplomas*" and exercise such powers as are incident to institutions incorporated for the promotion of medical science⁴⁰ there is no evidence that the Society ever conducted a School.

But in 1845, the "Trustees of the Alabama Medical University" were made a corporate body with authority to establish a medical college at Wetumpka, Alabama.⁴¹ The "Board" of the College was authorized to confer the degree of Doctor of Medicine upon fulfillment of certain requirements. Something must have gone wrong with the plans of the incorporators for they procured the Assembly at the next session to amend their charter by permitting them to establish their University at *any place* they selected.⁴² After this change, no further action was taken and the charter seems to have lapsed for non-user.

The second attempt to found a medical school was made by Montgomery citizens. A charter was issued under the title "The President, Trustees and Faculty of the Med-

37. House Journal 1876-7, p. 553.

38. Acts 1876-77, p. 80.

39. The Supreme Court gave strong approval to this law by holding that the Board of Censors of the State Association and the Boards of Censors of the several affiliated county societies *alone* had the power to determine the qualifications of persons desiring to practice medicine and to grant certificate of qualification. If a person engaged in practice without such a certificate, it was held he was guilty of a misdemeanor and, further, he could not collect for his services. *Harrison v. Jones*, 80 Ala. 412.

In 1907, Boards of Censors of County Medical Societies ceased to function as Boards of Medical Examiners, all examinations being given by the State Board of Censors acting as a Board of Medical Examiners.—Section 1626 of the 1907 Code of Alabama.

40. Acts Special Session 1841, p. 14 (April 28, 1841).

41. Acts 1844, p. 132.

42. Acts 1845, p. 63.

ical College of the State of Alabama at Montgomery."⁴³ But the school was never organized. The charter was near expiring when it was revived in 1873 by a new board of trustees.⁴⁴ This amended charter was also permitted to lapse without being put into operation.

The next effort to found a medical school succeeded. Dr. P. M. Sheppard, of Tallapoosa County, procured a charter from the Assembly for the "Graefenberg Medical Institute of Alabama."⁴⁵ Dr. Sheppard is named in the statute as the "proprietor and professor." The Institute was given the power to confer degrees and award diplomas. The founder was an energetic man and, regardless of the handicaps of location and poor equipment, he erected his buildings and put his school in operation. Medical Boards over the State gave full credit to Graefenberg graduates and recognized its diplomas without question. The school was vigorous and improving when secession and war came. Dr. Sheppard died before the war was over and the buildings which were located near Dadeville were destroyed by fire. All that remained to bear testimony to Dr. Sheppard and his Institute were quite a number of graduates actively practicing in the State.

The influence of the founding of Graefenberg Institute probably encouraged T. Carleton Coyle as "the proprietor and professor" to incorporate the "Hydropathic Medical Institute of the State of Alabama."⁴⁶ Be that as it may, Coyle got a charter from the Assembly similar to that received by Dr. Sheppard. The law provided that the Hydropathic Institute be located

at Rockford in Coosa County, but it seems never to have progressed beyond the first step of being incorporated.

Another attempt to found a medical school was made during Governor Winston's administration when a charter was procured for the "Alabama Medical College at Mobile." Although the Board of Trustees was composed of able and influential men⁴⁷ they failed to organize the College and the charter expired on account of non-user.

These various attempts to found a successful medical college within the State demonstrate both the need and desire for such an institution, which were finally met in January, 1860, when the Governor approved the law creating in the City of Mobile, the Medical College of Alabama.⁴⁸ The law made the College a department of the University of Alabama, yet provided it with an independent and separate Board of Trustees which was made self-perpetuating.⁴⁹

An appropriation of \$50,000.00 was made by the State, and generous citizens of Mobile donated an even larger amount, to acquire a site, erect buildings and pay for equipment. It was not enough but it was a beginning. The State had recognized its duty with a substantial appropriation. This was significant. The law also provided that that College receive one indigent student from each Alabama County, without charge and to have all the benefits of the College.

The first Board of Trustees was composed of Newton St. John, J. C. DuBose, Robert A. Baker, William D. Dunn, A. R. Manning, Duke W. Goodman, H. T. Smith, C. R. Foot, Murray F. Smith, Samuel G. Battle, Theophilus L. Toulmin, John Little Smith,

43. Acts 1849, p. 315 (The Trustees were Francis Bugbee, Charles T. Pollard, E. Y. Fair, Robert J. Ware, Silas Ames, A. B. McWhorter, H. W. Henry, Samuel D. Holt, James Berney, John McLester and William H. Reeves.

44. Acts 1872-73, p. 495. The new trustees were Joseph Bradley, William O. Baldwin, David P. Lewis, Josiah Morris, James Berney, John A. Elmore, D. S. Troy, Charles T. Pollard, Joel White, T. J. Judge and B. H. Micou.

45. Acts 1851-52, p. 260. Other members of the Board of Trustees beside Dr. Sheppard were Dr. James T. Shackelford, Dr. William M. A. Mitchell and Dr. J. T. Banks. In 1856 there was an unimportant amendment to the charter. Acts 1855-56, p. 214.

46. Acts 1853-54, p. 310. The other trustees were Drs. John J. Mitchell, Edward G. Doyle and James Floto.

47. Acts 1855-56, p. 252. The Trustees were John J. Walker, Newton St. John, James Battle, Bishop M. Porter, Robert A. Baker, General T. L. Toulmin, A. R. Manning, T. B. Bethea, Burwell Boykin, Arthur F. Hopkins and Cyrus Sibley. The charter was granted over the Governor's veto.

48. Acts 1859-60, p. 348.

49. The Legislature of 1903 appropriated \$20,000.00 for the College. The auditor refused to pay the money over because the Act had not been passed by a two-thirds majority of each house and the "educational institution was not under the absolute control of the State." The Supreme Court upheld the auditor and held that the State had no control over the College. *State ex rel. Medical College of Alabama v. Sowell*, 143 Ala. 494.

Charles LeBaron, N. H. Brown and John Forsyth.

This Board was given the authority by law to elect seven professors "to teach such sciences and arts as are usually taught in medical colleges, which professors shall constitute the first faculty of said College." Those selected were:

Josiah C. Nott, M. D., Professor of Surgery;
William Henly Anderson, M. D., Dean and Professor of Physiology;
George A. Ketchum, M. D., Professor of Theory of Practice of Medicine;
Frank A. Ross, M. D., Professor of Materia Medica and Therapeutics and Clinical Medicine;
J. W. Mallett, Ph. D., Professor of Chemistry;
F. E. Gordon, J. D., Professor of Obstetrics and Diseases of Women and Children;
J. F. Heustis, M. D., Professor of Anatomy.

Also appointed were Goronwy Owen, M. D. and A. P. Hall, M. D., Demonstrators of Anatomy, but these doctors were not classed as professors.

The law creating this Medical College was approved by the Governor on January 30, 1860. This same Assembly, on February 27, 1860, passed the resolution which prepared the way for Alabama to secede should the Republicans elect the President in the coming November election.⁵⁰ There was much uncertainty over the State due to the disturbed political conditions. It was thought that a functioning Medical College was necessary and vital to the life of the State regardless of the political results. The Board decided to start the school at the earliest possible time. The buildings not being ready, the first session was held in 1860 in rented quarters. There were one hundred and eleven students enrolled. When the 1861 session began the School's own quarters were ready and the enrollment rose to one hundred twenty. But in the same year came the war, and the halls, laboratories and lecture rooms of the new Medical College were soon empty. The College suspended operation—its scholars and professors had gone to war.⁵¹ The elegant building was uncared for, and expensive modern equipment and apparatus purchased by Dr. Nott on a special trip to Europe for that purpose was left to the ravages of rust and dirt.

50. Acts 1859-60, p. 685.

51. Six of the seven professors went into the Confederate Army.

After the capitulation of the South, the victors took possession of some of the public buildings in the State. The University buildings at Tuscaloosa had been destroyed by Federal troops, but the Medical College building at Mobile, although within the military order to destroy the University of Alabama, was overlooked. The Federal authorities in control of Mobile did, however, take possession of the building and turned it over to the Freedman's Bureau who used it as a primary school for negroes from 1865 to 1868.⁵²

The Superintendent of Public Instruction, N. B. Cloud, in his report to the Governor, William H. Smith, on November 10, 1869, preserved for posterity a description of the condition of the Medical College at Mobile during reconstruction days—"this noble institution with its several and large appointments, such as its rare and magnificent museum, its cabinets of natural history and geology and chemical apparatus for facilitating the acquisition of medical knowledge." Cloud further advised the Governor that he inspected the College buildings and described "its spacious and conveniently arranged lecture rooms, museums, the chemical laboratory, the spacious and beautifully filled cabinet of specimens in materia medica, and last but not least interesting, the finely arranged dissecting rooms."

Then Cloud noted with regret the conditions he observed—"the dilapidated condition of the walls, plastering, etc., endangering seriously the injury and waste of many of the rare and valuable specimens in the museums which have been collected in Europe and deposited here at a cost of \$70,000.00." The Superintendent suggested an appropriation sufficient to repair the College building and to replenish such of the lost apparatus as may be necessary to perfect the several cabinets, especially in the

52. Moore's History of Alabama, Vol. I, p. 345. It is to be noted that upon the failure of the Mobile College to open immediately after the end of the war in 1865, leading citizens of Greenville procured a charter for the "Southern Medical College of Greenville." The incorporators were M. C. Lane, John K. Henry, Samuel J. Bolling, D. G. Dunklin, John Gamble, T. G. Pow, W. H. Crenshaw, T. J. Burnett and S. F. Gafford. Acts 1865-66, p. 330. No record has been found that the College ever functioned.

chemical department.⁵³ The reconstruction legislature had just repealed the law which gave the College its only State revenue. They refused any appropriation from State funds, but the valiant Mobile doctors, under the leadership of Dr. William H. Anderson, Dean, reopened the School without any aid from the State or any assurance of future aid from the public treasury. As the State slowly recovered from the ravages of war and the waste of reconstruction, from its meager funds the Legislature appropriated limited funds for repairs, remodeling and the purchase of new equipment.⁵⁴

The Mobile doctors who so courageously revived the College in 1868, without State or public aid, were also men of learning, experience and determination. They observed a great need in the devastated State and to meet it they gave freely of their time and knowledge to the end that Alabama might have doctors of skill and learning.

Something of the spirit of these unselfish men permeated the entire College. The students caught the enthusiasm of their preceptors with the result that the institution soon became one of the best medical colleges in the United States. Although the State appropriations, which eventually were granted to the College, were small and uncertain, this handicap does not seem to have checked the continued success of the school. Some of the ablest doctors ever to grace that great profession won their degrees in the College at Mobile.

53. The Medical College grounds and buildings occupied a whole square. The City Hospital was entirely under the control of the College faculty and served as a teaching and training clinic for the medical students.

54. Acts 1882-83, p. 678, \$7,500; Acts 1890-91, p. 758, \$10,000; Acts 1907, \$45,000 plus \$5,000 annually to pay costs of one student from each County, where students were unable to pay their own tuitions.

These appropriations were not sufficient to meet the needs of medical education, with the result that other efforts were made. Southern University at Greensboro established a medical department which lasted from 1872 to 1880. A medical college at Montezuma University, at Bessemer, began in 1896, graduated a class in 1897 and closed in 1898. The Birmingham Medical College was founded in 1894, graduated its first class in 1895 and ceased in 1915 because it could not meet the requirements to be a Class A medical school. The School generously gave its property and equipment to the University of Alabama.

The slow passage of years did, however, eventually bring a decline in the fortunes of the College. The enthusiastic and gallant teachers of the 1870's and 1880's were old in service in the 1890's; few capable young men had come to help them carry on. There was no endowment, and financial support from the State was both uncertain and parsimonious. In the East the situation was very different. The great fortunes which had their beginnings during the war were now being used in part to endow colleges and universities in unprecedented amounts. These colleges had much to offer brilliant young men to come and teach in their up to date and completely equipped institutions.

Young men from Alabama and other southern states began to go north and east for their medical education and training. The College at Mobile was doomed. It had nothing with which to fight back, in this unequal struggle for existence, and so, having served its time and purpose, it passed on. What it did leave to posterity is a record of marvelous accomplishments, made in the face of tremendous obstacles, and a group of graduates, of the period when the College was in flower, who were second to none in the country. In 1915, in an effort to solve this difficult situation, the Legislature dissolved the old Medical College of Alabama and its corpus was then constituted the Medical Department of the University of Alabama and put under the sole ownership and control of the University. The law provided that the Medical College remain *at Mobile* "so long as it can be maintained in this City as a Class A School of Medicine as defined by the Council on Medical Education of the American Medical Association."⁵⁵

Then came the law of 1943. A modern medical college with a four year course was now assured. The law only needed to be put into action. On March 14, 1944, the Governor appointed the Advisory Board, consisting of Dr. W. M. Salter, of Anniston,

55. Acts 1915, p. 133. The University of Alabama School of Basic Medical Sciences was organized at Tuscaloosa in 1920 when the Medical College at Mobile lost its Class A rating because of insufficient funds to properly maintain the last two years of clinical instruction, and the condition in the law of 1915 permitting the closing of the Mobile College and the beginning of the Medical School at Tuscaloosa.

for the five year term, Dr. James S. McLester, of Birmingham, for the four year term, Dr. J. Mac Bell, of Mobile, for the three year term, Dr. W. D. Partlow, of Tuscaloosa, for the two year term, and Dr. Harry Lee Jackson, of Birmingham, for the one year term. The Governor also appointed Dr. Stuart Graves, Dean of the School of Medicine, as an ex-officio member.

The Building Commission provided for in the Act was named by the Governor on August 17, 1943. Those appointed were Dr. W. D. Partlow, of Tuscaloosa, Mr. B. Lonnie Noojin, of Gadsden, Dr. T. J. Jones, of Marion, Mr. James C. Lee, of Birmingham, Dr. Fred Wilkerson,⁵⁶ of Montgomery, Mr. A. F. Delchamps, of Mobile, Dr. C. L. Salter, of Talladega, Mr. H. A. Berg,⁵⁷ of Birmingham, and Gordon Madison, Esq., of Tuscaloosa. The Governor has served as Chairman. This group undertook the important and difficult task of choosing the best place to establish the Medical College. After a long and careful study, on February 16, 1944, after many public hearings, the committee adopted a resolution locating the College in Birmingham.

The Commission is divided into two subcommittees. These are the Building Committee composed of Mr. A. F. Delchamps, Mr. Lonnie Noojin and Dr. W. D. Partlow (Chairman), and the Contract Committee composed of Gordon Madison, Esq., Mr. James C. Lee and Dr. C. L. Salter.

On November 15, 1944, the Governor met with the Building Commission, the President of the University, Dr. Raymond Paty, the Dean of the Medical College, Dr. Roy R. Kracke, and the Commission of Jefferson County composed of Robert Wharton, President, and Earl Bruner and Henry W. Sweet, Associates. The meeting was held at the Jefferson Hospital. A ninety-nine year contract was entered into between Jefferson County and the University, the details of which are too lengthy to record here. The gist of the contract is that a University Medical Center will be created around the present Jefferson Hospital, which will become a "teaching and treat-

ment hospital" operated by the Medical College of the University.⁵⁸

The Medical College took charge of the properties on January 1, 1945. Classes will begin in the summer of 1945, when it is expected that fifty-six second year medical students will come to Birmingham from the University campus to continue their studies.

Much that is difficult remains to be done. Buildings must be erected, equipment assembled and schedules organized. These things can be taken in stride by the able men in charge. The main obstacles have been overcome for an adequate plant, and the funds to operate it are assured.

From Christmas Eve in Cahawba in 1823 until now is a broad span of years. They have not been easy years for Alabama and her people. Progress in medicine, and particularly medical educational institutions, has been spasmodic and faltering. The present is good and the future seems favorable. May this be such a college as would satisfy the dreams and ideals of those stalwart Alabama men who lived their lives for medicine and now are gone: John Bassett, Marion Sims, John Allan Wyeth, Jerome Cochran and William Crawford Gorgas.

(To be continued)

58. The Medical Center is designed to care for both non-paying and paying patients. It is expected that other units will become integral parts of the Center, such as the Children's Hospital, a new hospital for Negroes, and a combined City-County Health Department. The heirs of the Hillman Hospital Board of Lady Managers gratuitously surrendered their rights in the Hillman Hospital property. Mr. Oscar Wells was Chairman of the Citizens Committee which raised \$150,000.00 with which to purchase a block of property to be given to the new Center. The old part of the Hillman Hospital building will be torn down and here the new Medical College building will be erected in such a way as to integrate with the newer part of the Hillman structure. Everyone who has had part in creating the medical center has reason to be proud of what has been accomplished.

The person who realizes that he has tuberculosis is more likely to take better care of himself and be more on guard against spreading his infection than if he is ignorant of the fact that he has the disease.—*John L. Rice, M. D., N. Y. State J. Med., Feb. '45.*

Prompt diagnosis of tuberculosis is important to the patient, family and community. Every suspected case should be cleared of suspicion as quickly as possible by being proved innocent or guilty of harboring the disease.—*The Modern Attack on Tuberculosis, Henry D. Chadwick, M. D. and Alton S. Pope, M. D.*

56. Resigned, and his place filled by Dr. Lewis Clayton Davis, Jr., of Gordo, Alabama, on October 15, 1943.

57. Resigned, March 15, 1944, which resignation was accepted on July 1st, and Mr. I. W. Rouzer appointed to the vacancy.

PREPAYMENT MEDICAL CARE FOR THE STATE OF
ALABAMA

A. C. JACKSON, M. D.

Jasper, Alabama

In the past twenty-five years much has been written, both pro and con, about socialized medicine; and, since the advent of the New Deal in 1933, the banner for some form of State medicine has been hoisted high by certain individuals. As a consequence, several bills have been introduced in the United States Senate providing for tax-supported medical care. One Senator introduced a resolution in 1937 that provided the following:

"It shall be compulsory for physicians to render any medical aid requested of them by the indigent. Bills for such services shall be paid by the Social Security Board. Jail sentences of three months and fines of not over \$1,000.00, or both, for doctors who decline their services, make excessive charges, or try to collect from the patient."

This resolution, though conceived by the mind of a late Democratic Senator, is but the essence of socialism. The cost of a program for compulsory sickness insurance covering the entire population of the United States would, in the opinion of one of its proponents, be about five billion dollars annually, or five percent of the present inflated national income. This would be a dear price to pay for an inferior medical service.

There is no denying the fact that public opinion is strong for some prepayment plan for medical care, and that is the reason why lawmakers continue to introduce bills pertaining to it. What has organized medicine done about answering this demand from the public? Not a great deal, generally speaking, although it is conceded that several states have made notable progress. We are living in a rapidly changing world, and it is a responsibility of physicians to do some constructive thinking and lay plans for action in the immediate future if they expect to hold their position of prominence as a profession in the postwar period.

At the 1944 meeting of the State Medical Association in Montgomery, Dr. Fred Wilkerson, the retiring president, made a recommendation in his annual address that the president-elect, Dr. Walter Scott, appoint a Postwar Planning Commission, charged

with the duty of making a special study of prepayment medical care plans and submitting recommendations to the State Board of Censors after getting all possible information on the subject. The Commission was appointed and is composed of the following prominent physicians of our state: Dr. M. S. Davie, Dothan, Chairman; Dr. C. A. Grote, Huntsville; Dr. J. O. Morgan, Gadsden; Dr. W. Hill McCaslan, Union Springs; Dr. B. F. Austin, Montgomery; Dr. B. W. McNease, Fayette; Dr. Douglas L. Cannon, Montgomery, and Dr. J. Banks Robertson, Fayette. Later, Dr. Roy R. Kracke, Dean of Alabama Medical College, was added as an ex-officio member. The Commission was divided into groups and each group assigned certain states, where prepayment medical plans have been set up, to make a personal study of the plans. These groups had interviews with men in authority in Washington and made personal studies of the prepayment medical plans in Maryland, Delaware and Michigan; and obtained written reports on the California plan. A perusal of their voluminous report convinces one that they gathered much valuable information. After assembling the data compiled from all of the places, the commission as a whole came to the following conclusions:

1. That no prepayment medical care plan to succeed can offer a complete medical service to all of the population. Michigan tried this on a large scale, and the plan showed a marked deficit in a very short time.
2. That a prepayment medical care plan is feasible if it offers to pay only for medical care in catastrophic illness; namely, surgical, obstetrical and medical care for patients in hospitals—the fees for medical service in the homes to be paid by the patients.
3. That this prepayment medical care plan should be offered to the public through the medium of a Blue Cross Hospital Plan on a non-profit basis.
4. That the medical profession should encourage the county and state governments to provide ample medical care for the indigent.

At a joint meeting of this Commission and the State Board of Censors in Montgomery on March 7, 1945, the Commission made a

report of its study and conclusions, and made a request that the Board of Censors endorse a prepayment medical plan for the State of Alabama; and that it be patterned according to the Delaware plan which is integrated with the Delaware Blue Cross hospital plan. After carefully studying the report of the Commission, the State Board of Censors passed a resolution petitioning the Hospital Service Corporation of Alabama to arrange to furnish, on a prepayment basis, medical, surgical and obstetric care in hospitals.

The Hospital Service Corporation of Alabama is a stepchild of the State Medical Association since the law under which it operates and many of its rules and regulations were endorsed by the State Board of Censors before it opened for business in 1936. The Corporation, which is non-profit and tax free, has grown gradually from a small beginning to a sound financial position, owning a home office building in Birmingham and having assets of \$750,000.00. It is now rendering a public service to almost 150,000 citizens of our state by giving them prepayment hospital care. In order that it may offer prepayment medical care (to cost the public about three cents per day for each person and seven cents per day for each family), the law under which it operates has been amended, and the Board of Trustees of the Corporation expanded to include six members of the State Medical Association nominated by the State Board of Censors. Three of the six have been named to the Corporation's Executive Committee.

The Delaware plan does not attempt to set the fee of the doctor, but states to the certificate holder that a specified amount will be paid on the fee charged and the same is true of the Alabama plan. The fee schedule that has been adopted is very liberal and should cover the entire fee in most instances. Most of the doctors in Delaware have entered enthusiastically into the plan in operation there and it is believed that Alabama's physicians will be equally responsive. It is an advantage to the plan to have most of the doctors of the state as participants since they will then consider themselves a part of the organization and safeguard its interests. For the plan to succeed, it must have the wholehearted cooperation of the medical profession as a whole.

Knowing the medical profession as I do, I

am sure that some are going to say, before the plan is tried, that it will not work. But we must face the issue and work out our own plan or a socialized scheme will be forced upon us. Much spade work has been done by our Postwar Planning Commission on this vital issue facing the medical profession; and it behooves us not to scrap it now but show the general public that we have the courage, wisdom and vision in our own profession to set our house right by meeting the demands of a changing world and social order to the extent that the best possible medical care will be furnished the citizens of our state, and on a prepayment basis if that is the way they want it. Alabama has a Health Department that is considered a model the world over, and it is the product of much hard work by our predecessors in the medical profession of this state. We have an outstanding statewide Blue Cross hospital plan. We now have the opportunity of doing pioneer work in establishing a prepayment plan for medical care for our citizens. We must resolve here and now to rise to the occasion, meet the issue, and solve the problem in our own organization while we yet have the time.

Prostatic Infections—Prostatitis or chronic prostatic infection is no longer considered a disease of youth, or the direct result of venereal infection. Prostatitis is common in middle life and in old age, and is frequently unrecognized or overlooked. It is a nonspecific focal infection, usually spread by the hematogenous route from infectious foci elsewhere in the body, particularly abscesses of the teeth, infected gum pockets, and diseased tonsils. It may develop as a result of upper urinary tract infection, gallbladder disease, influenza and other infections. It sometimes manifests itself by a clinical picture of arthritis. It is diagnosed by examination of the prostatic secretion expressed by massage.

The sulfonamide drugs appear to have no effect upon prostatic infection, and massage of the prostate is still the indicated method of treatment. This procedure should be undertaken with caution in the presence of acute arthritis, as it may produce a severe exacerbation. If there is any suspicion of malignancy or tuberculosis, massage is contraindicated because of the danger of spreading the disease.—Baretz, *North Carolina M. J.*, August '45.

**ANNUAL MEETING
OF THE
ASSOCIATION
BIRMINGHAM
APRIL 16-18, 1946**

MARION SIMS AND OTHER 19TH CENTURY PIONEERS

THE DAWN OF SCIENTIFIC MEDICINE AND SURGERY

SEALE HARRIS, M. D.
Birmingham, Alabama

One hundred years ago in the then small city of Montgomery, Alabama, Dr. James Marion Sims was performing miracles with scalpels, scissors, needles, silk and silver wire sutures. Practicing surgical cleanliness, his methods approached the aseptic technique of the present time. He invented instruments that revolutionized surgery. He devised and perfected operations that cured women of the accidents of childbirth from which they had suffered, without relief, since Eve ate the forbidden fruit in the Garden of Eden.

Sims was the pioneer in scientific surgery of Alabama. Seeking a larger field of usefulness, he moved to New York in 1853, where, because of professional jealousy, he was denied the privilege of operating in hospitals. Without friends, money or prestige, he founded the Woman's Hospital; and soon his operating room was the Mecca for medical students and physicians in the great metropolis. He towered above his adversaries as Saul did above Israel, and after one year of practice in New York, he ranked as the greatest American surgeon.

Then, on to Paris in 1861 where he practiced surgery for ten years, having among his patients Empress Eugenie'. While treating her, he lived in Saint Cloud, the summer palace of Napoleon III. He performed operations successfully which startled and delighted French physicians; and in less than one year after he arrived in Paris, he became the foremost surgeon on the continent of Europe. In 1870 he volunteered for service and was commissioned a colonel in the French Army in the Franco-Prussian War. As Surgeon-in-Chief of a French Army Hospital at Sedan, his technique in gunshot wounds of the abdomen differed but little from that employed by American surgeons in World War I and World War II.

Back to New York in 1872, with the prestige of unprecedented success in Paris, he again assumed leadership in surgery in the medical center of the United States. Though his envious colleagues tried the second time

The first of three installments. The second will appear in the November Journal.

to destroy him, he was accorded every honor in the gift of the medical profession in his homeland. For the last ten years of his life, James Marion Sims was revered as the greatest surgeon in the world. On November 12, 1883, at the age of seventy, he spent a busy day in his operating room. Included in his operations was a difficult and successful surgical procedure on the wife of a prominent New Yorker. After dinner with his family Sims said: "This has been one of the happiest days of my life." That night about eleven o'clock, when he returned from a visit to the hospital, he complained of a slight chill. Four hours later, he awakened, startled, called Theresa, his adored, talented and beautiful wife, who had been his comrade, inspiration and full partner throughout his professional career, and, without a struggle, died in her arms. The ancient Greeks believed that sudden death is reserved for the favorites of the gods.

For drama, romance and achievement, the meteoric career of James Marion Sims is without parallel in the annals of medicine.

James Marion Sims was born January 25, 1813. He died on November 13, 1883. He was one of a few pioneer doctors, who, in three or four decades of the 19th Century, added more to the basic knowledge of medicine and surgery than had been accumulated in the thousands of years that had passed since man was known to inhabit the earth. Measured in terms of lives saved, the sum of the achievements of a dozen men, contemporaries of Sims, has been the greatest boon to the human race in the history of mankind. Untold millions of men, women and children now living, and yet unborn, will enjoy health and happiness throughout long, useful lives because a few geniuses had the vision to interpret correctly phenomena related to various diseases, and dared to achieve seemingly impossible tasks. They were the medical master builders, who drew the plans, laid the foundations, built the frame work and placed the keystone in position in the structure upon which mod-



J. Marion Sims

ern medicine and surgery have been built—but the building is far from being ready for the capstone. Medicine is yet a long way from being an exact science.

Medicine as Practiced in the First Half of the 19th Century. The darkest hours in the history of medicine were in the first half of the 19th Century when bleeding, blistering, puking and purging were practiced. The armamentarium of a doctor of that time consisted of a lancet for venesection and opening abscesses; cantharides for blisters, and as an aphrodisiac (?); ipecac, squills, antimony (tartar emetic), stramonium, mercury, digitalis, opium and a few other drugs—all of which were used empirically.

Malaria. While cinchona bark had been introduced into Europe in the 17th Century, its alkaloid, quinine sulphate, was not isolated until the early part of the 19th Century. Quinine was not in general use in the United States until after 1850. Hundreds of thousands of citizens of the new republic died of malaria in the first half of the 19th Century. Sims said of the treatment of malaria before quinine was available: "Patients were bled, purged, administered tartar emetic, and given fever mixtures every two hours day and night; they were salivat-

ed, and they died. Those who were bled and purged the strongest died the quickest."

A few years later, after quinine came into general use in Massachusetts, Oliver Wendell Holmes, contemporary with Sims, in picturesque language cried out against the heroic treatment of malaria then generally practiced. He said: "What wonder that the stars and stripes wave over doses of ninety grains of quinine and that the American eagle screams with delight to see three drachms (180 grains) of calomel given at a single mouthful."

An epidemic of malignant malaria, described by Sims, probably caused the deaths of at least half the settlers in, and near, Mount Meigs, Alabama, in the summer and fall of 1836. After having witnessed the deaths of many of his friends and patients from malaria, Sims himself contracted the disease and went to bed, expecting to die. He refused to be bled, puked and purged. His life, therefore, was prolonged for a few days when a druggist from Montgomery, who had a few doses of quinine in his satchel, chanced to be in Mount Meigs. He gave his quinine to a doctor whom he had never seen before, and thus saved the life of a man who later made discoveries that brought health and happiness to millions of others. Sims was "snatched from the grave" the second time, in 1840, when Dr. Holt of Montgomery brought quinine to him at Shorter, Alabama, where he had another attack of malignant malaria.

Smallpox. In the 18th Century smallpox prevailed all over the world, even in remote islands. George Washington developed the disease in 1751 at Bridgeport on the little island of Barbados in the West Indies, whence he had carried his half-brother, Lawrence, in quest of a cure for tuberculosis. He said in his diary that he "was strongly attacked with smallpox." Rupert Hughes, in his biography of Washington, said: "When one imagines what a difference it meant to the world whether or not the young Virginian, gasping in the remote little island, should join the throng graveward, or should recover, the name of Dr. Landham [the doctor who treated Washington] should not be forgotten. Washington survived and the immunity to further attacks of smallpox was of infinite value to him all his life. But his face was

thereafter pitted, as at least one-third of the faces were in antivaccination days; yet Weems, who knew him, assures us that the smallpox 'marked him rather agreeable than otherwise.'"

Smallpox was prevalent in some of the sparsely settled American colonies at the outbreak of the Revolutionary War. When the Colonial Army collected many men together, it became a scourge among the soldiers of both the American and British armies, particularly in prison camps. Of 20,000 American slaves captured by the British, and who were kept in concentration camps, it is estimated that 15,000 died of smallpox. During the Revolutionary War an epidemic of smallpox in South Carolina caused the deaths of more soldiers in that state than were killed by the British Army.

Lord Cornwallis' troops overran Lancaster County, South Carolina, in which twenty-five years later Marion Sims was born. They captured many colonial soldiers, some from the army of the intrepid General Francis Marion, "the Swamp Fox" of Revolutionary fame—for whom Marion Sims was named. These captured soldiers, and many civilians, revolutionary sympathizers, were sent to a British prison camp in Columbia, South Carolina. Included among them were neighbors and relatives of the Jackson family in the Warsaw settlement, then the headquarters of General Cornwallis. The mother of President Andrew Jackson, who at that time was a boy fourteen years of age, though she knew that it meant almost certain death, volunteered to serve as a nurse to aid in caring for Colonial soldiers stricken with smallpox in the British prison camp at Columbia. Sarah Jackson contracted smallpox and died. She was one of the casualties, and a heroine, of the fight for freedom by liberty-loving Americans. This episode is mentioned because it brings out something of the background of Marion Sims. The Jacksons were distant neighbors of Sims' grandfather and grandmother.

Edward Jenner. One bright spot on the horizon before the dawn of scientific medicine was the discovery by Edward Jenner (1749-1823) that the inoculation of humans with the virus of cowpox would prevent those inoculated from having smallpox. Jenner's announcement of his great discovery, in 1798, came too late to save many

thousand early Americans, and it came after smallpox had destroyed at least one-fourth the population of the British Isles and the continent of Europe; but vaccination was generally practiced in the United States in the early years of the 19th Century.

Marion Sims was ten years old when Edward Jenner died in 1823. Jenner left vaccination as a legacy to billions of human beings who would live after him. Marion Sims was one of his legatees. Vaccination probably saved his life when he, then a medical student in Philadelphia in 1826, nursed a fellow-student, day and night, for a week before he died of a virulent form of smallpox. It is not possible to estimate how many men and women, who have made great discoveries, have been saved to civilization because a country doctor in England interpreted the phenomenon of immunity to smallpox among dairy-maids to mean that the inoculation of humans with the virus of vaccinia (cowpox) would render them immune to variola (smallpox).

Deadly Surgery. When Marion Sims was graduated from Jefferson Medical College in Philadelphia in 1836 the surgery then practiced was crude and murderous, though only minor operations were attempted. The lancet, a small, very sharp, double-edged, folding knife, kept in the doctor's vest pocket when not in use, was probably the deadliest instrument ever devised by man. From the first day it was used by a doctor to open an abscess, it carried pyogenic bacteria to infect the wounds inflicted by him on his trusting patients, until palsy, or death, came to end the career of its well-meaning owner.

Next to the surgical instruments used by physicians from 1800 to 1865, the doctors themselves transmitted deadly germs from one patient to another, on their hands and clothes. It is probable that in the dark days of the first half of the 19th Century doctors killed more of their patients than they cured. Physicians of that period were as able and as conscientious practitioners as they are of this day of scientific medicine and surgery. They applied the medical knowledge then available to them, and they are not to be blamed for the tragedies of the sick room that occurred in that black era of medicine. They did their best—"and an angel can do no more."

But there lived in the first half of the 19th Century many doctors who realized the menace to their patients resulting from the medical and surgical treatment of the sick, as then practiced. They were dissatisfied with themselves and disgusted with medicine and surgery; they began to doubt the teachings of the so-called authorities who wrote textbooks, and to think for themselves.

Ephraim McDowell. No surgeon had dared to invade "the sacred precincts" of the abdomen until Ephraim McDowell (1771-1830), pioneer doctor, removed an abdominal tumor weighing 22 pounds from Jane Todd Crawford, in his own home at Danville, Kentucky, in 1809. While he was operating, a number of protesting neighbors waited outside his house to hang McDowell had Mrs. Crawford died from the unheard of procedure. Fortunately she lived. Dr. McDowell found his [now famous] patient up making her bed on the fifth postoperative day. She went home, sixty miles, on horseback on the twenty-fifth day. She lived to be 79 years of age.

McDowell waited seven years, until he could add two other successful cases, before he published a report of his operation in *The Eclectic Reportory* in 1817. An envious and jealous doctor published an article later in the same journal in which he expressed doubts of McDowell's veracity. McDowell's reply, published in 1819, in which he added reports of two other successful cases, was convincing; but, during his lifetime, "the father of abdominal surgery" received no credit from American and British surgeons for his great achievement. Half a dozen surgeons attempted the operation, but most of their patients died of general peritonitis. In 1841 the Atlee Brothers of Lancaster, Pennsylvania, operated successfully on a woman who had an abdominal tumor, and they gave full credit to Ephraim McDowell for his pioneer surgery of the abdomen.

McDowell's operation was attempted by John Lizars in Edinburgh in 1823 but he failed to find a tumor. In publishing a report of his case, Lizars included a review of McDowell's cases. In 1829, a year before his death, McDowell had a record of 11 operations for ovarian tumors with only one death. Had he been operating in a city hos-

pital, in which at that time infections almost invariably followed every kind of surgical procedure, his operative mortality probably would have been a hundred per cent.

In 1842, eleven years after Ephraim McDowell's death, and thirty-three years after his first ovariectomy, Charles Clay of Manchester, England, successfully removed an ovarian tumor. To the British he is "the father of abdominal surgery"—even though the facts of McDowell's successful operations three decades before were submitted to English gynecologists.

The Discovery of Anesthesia. The progress of surgery had been stifled for centuries because the torture of the victims of any kind of an operation made it impossible to attempt anything but emergency surgery. The discovery of anesthesia therefore was the first step in the development of modern surgery.

The first physician to perform a surgical operation in which the patient suffered no pain was Dr. Crawford W. Long (1815-1878), who lived in the village of Donalds-ville, near Athens, Georgia, in 1842. To amuse his friends, Dr. Long gave what he called "ether frolics" in his office. On such occasions, after inhaling a few whiffs of sulphuric ether, the young folk became acutely intoxicated. They would fall over chairs and do many queer, ludicrous things. Sometimes they sustained large bruises when they were under the influence of ether. After recovering consciousness they did not remember feeling any pain from such injuries. It occurred to Dr. Long that surgical operations could be performed without pain if the patient were etherized. His first operation on a patient under the influence of ether was the removal of a tumor from the neck of James Venable in 1842. During the same year he performed several other operations with the patients under the influence of ether.

Unfortunately Dr. Long did not publish a report of his cases until after Dr. Horace Wells (1815-1848), a dentist of Hartford, Connecticut, had used nitrous oxide to prevent pain in the removal of a tooth in 1844; and William Morton (1819-1868) had used ether in an operation performed by Dr. Warren, senior surgeon of the Massachusetts General Hospital in Boston, in 1846. Had Dr. Long reported his operations on ether-

ized patients, he would have had the indisputable credit for the discovery of surgical anesthesia; and he would have prevented one of the most discreditable controversies in the history of medicine. The facts of this controversy were as follows: William Morton was a student of dentistry under Dr. Horace Wells when the latter first used nitrous oxide gas for the painless removal of a tooth. Later at Harvard, where he was studying medicine, Morton learned from Dr. Charles Thomas Jackson (1805-1880) that sulphuric ether had properties similar to nitrous oxide. (Jackson also claimed to have suggested to Morse the principle of the telegraph.)

After the widely publicized operation under ether at the Massachusetts General Hospital, Morton applied for a patent on the well-known drug, ether, under the trade name of "letheon." He sent out the following announcement: "I am now fully prepared to dispose of licenses to use my invention and apparatus in any part of the country upon the following general terms:

Terms For Dentists

In cities of 150,00 inhabitants, \$200 for five years

In cities of 50,000, and less than 150,000, \$150 for five years

In cities of 40,000, and less than 50,000, \$100 for five years

In cities of 30,000, and less than 40,000, \$87 for five years

In cities of 20,000, and less than 30,000, \$75 for five years

In cities of 10,000, and less than 20,000, \$62 for five years

In cities of 5,000, and less than 10,000, \$50 for five years.

Surgeons' licenses for five years, 25 per cent, on all charges made for performing operations wherein the discovery is used.

W. T. G. Morton

Wells accused Morton of "stealing" his discovery of anesthesia. Morton and Jackson had a quarrel in their effort to commercialize ether and dissolved partnership. Jackson claimed that he had "invented" anesthesia—that he had given the idea to Morton was not denied. He then joined Wells in an effort to discredit Morton. Morton failed to get a patent on "letheon" and applied to Congress for an appropriation of \$100,000.00, for the privilege of using ether in the United States Army and Navy. In the meantime the controversy raged among the doctors of Boston and unethical conduct

was charged against Morton. Morton and Jackson presented their claims to priority of the discovery of anesthesia to a Congressional Committee. Their acrimonious and vituperative testimony to discredit Morton covered 57 pages of the Congressional Record. The tricorned fight raged in Congress until a senator from Georgia presented proof that Crawford W. Long had used ether in operations two years before Wells had used nitrous oxide, and four years before Morton had used ether. Whereupon, a disgusted Congress killed the bill to reward William Morton for the discovery of anesthesia.

Oliver Wendell Holmes (1809-1894) coined the noun "anesthetic" to define the substance used in producing what he called "anesthesia." During the controversy which raged between Morton and Jackson, Holmes, when asked to whom should be given the credit for discovering anesthesia, replied: "To e (i) ther."

The lives of Wells and Morton became embittered, and their usefulness was largely destroyed, because of their hatred for each other and their eagerness for fame. Wells, in an attempt to produce surgical anesthesia with nitrous oxide, caused the death of a patient on the operating table. A few years later he ended his unhappy life by severing his radial artery. Morton neglected his practice and became poverty-stricken to the extent that his friends had to aid in the support of his family. Disappointed and miserable he died of apoplexy at the age of fifty-one.

A statue of Crawford W. Long stands in the Congressional Hall of Fame, in Washington, presented by his native state of Georgia; and his Alma Mater, the University of Pennsylvania, had a tablet placed in one of its buildings, commemorating him as "the discoverer of anesthesia." In Hartford, Connecticut there is carved, on the granite pedestal of a statue, the name of Horace Wells, "the discoverer of anesthesia." In the Massachusetts General Hospital in Boston there is a tablet in memory of William Morton, "discoverer of anesthesia." In Germany there is, or was in 1906, a statue erected to proclaim to the world the name of the German "discoverer of anesthesia."

Who discovered surgical anesthesia is of less importance than the fact that it was dis-

covered. It has revolutionized the practice of surgery, and has alleviated the sufferings of untold millions, many of whom without it would have been denied life saving surgical operations.

Chloroform. Morton deserves credit for being the first to report a successful operation under the influence of ether. The news travelled fast around the world with far-reaching effects. In less than a year later, in 1847, Sir James Simpson (1811-1870), professor of medicine and obstetrics in the University of Edinburgh, tried ether to deaden the pains of childbirth. The odor of the ether and the first stage of intoxication was so disagreeable to the patient that she could not be completely anesthetized. Simpson, one of the great medical pioneers of his time, discovered that chloroform was pleasant to take, and that its effects were quicker and more profound than ether. Simpson used chloroform in a difficult case of labor with such happy results that he published a report of this case a few weeks later. His discovery brought the denunciation of the clergy on his head for interfering with "God's edict" (?) that "in sorrow thou shalt bring forth children." But Simpson's head was not defenseless. His replies to the clerics, Dr. Meigs of Philadelphia, and other conservative doctors, who joined in the wordy opposition to the use of chloroform in labor, silenced them and other critics. In less than two years chloroform had been used on 50,000 persons in Edinburgh alone. Howard W. Haggard, author of *"Devils, Drugs and Doctors,"* in describing the controversy over the use of chloroform in childbirth, gave to medical literature one of its most dramatic chapters.

But Simpson's discovery of chloroform anesthesia was not altogether a benevolent accomplishment. While it may be a comparatively safe anesthetic for the woman in parturition, since few fatalities have been reported from its use, it has caused more tragedies in the operating room than all the other anesthetics combined.

Dr. Sims was one of the first to call attention to the high mortality from the use of chloroform, which, even in the United States where the use of ether as an anesthetic was discovered, because of the ease of its administration, was widely employed in surgery. In Europe chloroform was used

almost altogether. Dr. Sims, in his autobiography, gave a dramatic account of a near fatality from chloroform in an operation which he performed in Paris in 1861, for vesico-vaginal fistula on a very rich and important patient of Nelaton, the then premier surgeon of France. Fortunately for Sims, the patient survived; the operation was completed, and the woman cured. In discussing this case, Sims said: "Deaths from it (chloroform) in general surgery occur constantly, and for unimportant operations." He concluded: "I think the safest plan is to relinquish the use of chloroform altogether except in obstetrics. The frequent cases of death from the use of chloroform in surgical operations that have occurred among us should warn us to give up this dangerous agency, if we can find another that is efficient and at the same time free from danger. Ether fulfills this requisite to a remarkable degree; but, while it is safe, it is offensive to the physician and bystanders as well as to the patient. Chloroform is delicious and dangerous; ether is disagreeable and safe in purely surgical cases."

Sims protested against the use of chloroform for thirty years before his death in 1883, and he endeavored to find a substitute for chloroform and ether. He tried nitrous oxide in 1868—and published an article in the *British Medical Journal* setting forth the advantages and the imperfections of the anesthetic discovered by Wells in 1844. In 1874 he read a paper before the British Medical Association, published also in the *American Journal of Medical Sciences*, in which he called attention to the hazards of chloroform anesthesia, but described Nelaton's method of resuscitation in the event of threatened danger in its administration.

Sims had never heard of Dr. Crawford W. Long until in October 1876, when Dr. P. A. Wilhite of Anderson, South Carolina, informed him that in 1842, when Dr. Crawford W. Long was his preceptor in the study of medicine, he had assisted him in the first operation ever performed under the influence of ether. Dr. Wilhite also said that he had administered ether to several patients operated upon by Dr. Long in 1842, 1843 and 1844. On further investigation Sims became convinced that credit for the discovery of ether as a surgical anesthetic should be

given to Dr. Long. In 1877 he prepared an article in which he listed Long as the discoverer of ether anesthesia in 1842, and Horace Wells as the discoverer of nitrous oxide anesthesia in 1844. He felt that Morton should be credited with having brought the attention of the medical profession to ether as a surgical anesthetic. He personally raised a considerable sum of money from among his surgical friends and sent it to Dr. Long, then an old man living in Athens, Georgia, as an expression of appreciation for his discovery of ether as an anesthetic. Crawford W. Long died in 1878. The following year Sims published an article on "History of the Discovery of Ether," in which he insisted that Long was the discoverer of surgical anesthesia.

Sims continued the search for a safe anesthetic without the disagreeable effects of ether. He was induced to try bromide of ethyl. The patient died a few days later from acute nephritis, which Sims thought was induced by the use of bromide of ethyl. He reported the case at a meeting of the New York Academy of Medicine in 1880. The paper was published in the *Medical Record* and *Gailliard's Monthly*.

In spite of the crusade by Sims against the use of chloroform in surgical anesthesia it was in general use in the United States until the first decade of the 20th Century, and even now it is preferred by a few surgeons of limited experience. It may not be inappropriate to mention that, in 1901, my son, then an infant, 18 months old, was almost killed by a hospital interne, who was not aware of the danger from chloroform. Dr. Bodine in the Polyclinic Hospital—founded by Sims' son-in-law, Dr. John A. Wyeth—was performing a simple circumcision. I saw that the child was getting too much chloroform but the interne poured more on the inhaler. I caught his arm and prevented him from placing it on the child's face. At that moment Dr. Bodine saw that the child had stopped breathing and was deeply cyanotic. He saved his life by catching him by the feet and hanging his head down while artificial respiration was performed—the Nelaton method which Sims brought back from Paris. In a few minutes the child was breathing again and the operation was completed.

Even after that near tragedy I preferred chloroform as an anesthetic, believing that the accidents resulted from its improper administration. My associate, using the drop method, could keep an adult anesthetized for two hours with less than two drachms of chloroform. In 1904 a strong husky man, thirty years of age, walked from his home to the hospital for an elective minor operation. After inhaling a few drops of chloroform he became livid and stopped breathing. In spite of prolonged efforts at resuscitation he never breathed again. He evidently died instantly of heart failure. This tragedy incited me to investigate the mortality of chloroform anesthesia in Alabama. Questionnaires sent to a large number of physicians revealed that at least one person out of a hundred, on whom chloroform had been used by capable Alabama physicians, died—usually after inhaling a few drops of chloroform. So many doctors in Alabama had deaths from chloroform, they abandoned its use. Chloroform was the anesthesia of choice in Europe as late as 1906. The United States Government prohibited the manufacture of heroin years ago because it was a dangerous habit forming narcotic. Many lives could be saved if chloroform could be thrown in the waste basket of drugs that have been tried and found too dangerous for use in medicine and surgery.

(To be continued)

Traditionally, or otherwise, it may be that health officials do not allocate sufficient time or devote sufficient energy to dealing in a practical way with the tuberculosis problem. In view of the comparative size of the problem, should we not change our point of emphasis and direct our attention more vigorously toward this disease, which, from the standpoint of health and social and economic security, assumes far greater significance than all the acute communicable diseases together? When a physician sees even a possible case of scarlet fever, he usually goes into action. Jointly with the health department, all recognized steps of prophylaxis are promptly introduced. Preventive medicine assumes a conspicuous place in his thinking. The same applies where other acute communicable diseases are suspected or diagnosed. Because of the acuteness of many of these diseases, perhaps the circumstances become more dramatic. The presence of acute and serious illness engenders a greater desire for prompt and immediate action and assistance.—Robert E. Plunkett, M. D., *Connecticut State M. J.*, January '44.

JOURNAL ABSTRACTS

Forearm Fractures—Since the ulna is subcutaneous throughout its entire length, it is easily fractured by direct blows as in throwing up the forearm to parry an attack. The ulna is never fractured in falls on the outstretched hand because such forces are always transmitted from the hand to the radius. Also because it is subcutaneous, ulnar fractures are often compounded. When the ulna alone is fractured and there is displacement of the fragments, roentgenograms should include the elbow and wrist to make certain that injuries to the superior and inferior radio-ulnar articulations are not overlooked.

The ulna is usually fractured in its lower half because of the relative slenderness of this portion of the bone. Ulnar fragments are seldom displaced by muscle pull and for that matter are overlapped only when the superior or inferior radio-ulnar articulations are damaged.

Ulnar fractures without displacement are treated by a cast from the axilla to the base of the fingers with the elbow flexed to a right angle and the wrist and elbow must be immobilized to prevent rotation of the ulnar fragments and consequent shearing of the healing callus. After three weeks, the long cast can be replaced by a cast from the elbow to the base of the fingers, which should be worn for another three weeks. When this cast is removed, the fracture can be tested for motion or tenderness and, if they are present, another cast applied until healing is completed. *Union is not complete as long as there is tenderness over the fracture site.*

Ulnar fractures with displacement or comminution should be manipulated by direct pressure until the fragments are in satisfactory contact. With general anesthesia, direct traction is made on the hand or the hand is "rocked" medially on the intact radius to give longitudinal traction. If the fragments can be engaged this is usually all that is necessary. If they cannot be secured properly, the fracture should be exposed and the fragments fastened with a vitallium plate and screws. Afterward a cast is applied from the axilla to the base of the fingers for eight weeks.

A patient with a "sprained wrist" after a fall on the outstretched hand is likely to have a small fragment fractured off the distal end of either the radius or the ulna. The styloid process of the ulna is easily broken off if the force of the fall is on the hypothenar eminence of the hand. In case of doubt, a roentgenogram of the wrist should always be made to prevent inadequate treatment.

Fractures of the ulnar styloid are best treated by manipulating the hand into a position of ulnar deviation and dorsiflexion, after which a cast is applied from the elbow to the base of the fingers. Such a cast should be worn six weeks. After its removal, the styloid should be tested for tenderness to determine if longer immobilization is necessary.—*Stuck, Texas State J. Med., September '45.*

The Non-Surgical Therapy of Epilepsy—Before treatment is begun, all diagnostic studies should be completed. Otherwise, a certain percentage will not return for completion of studies once the convulsions cease. If there is sufficient intelligence, we insist that the patient keep a diary recording the number of seizures, the exact time at which they occur, a subjective and objective description of the pre-convulsive, convulsive and post-convulsive periods, a description of anything unusual which happened prior to the seizure. From the very beginning, we attempt to encourage the patient and his family and to make them realize that they have someone who is interested and available at any time for any problem, whether or not related to epilepsy. We also emphasize that patience must be maintained, since it may require a year or even more before the best drug or combination of drugs is found. We frankly tell the patient our diagnosis except in rare instances, and particularly avoid the use of words like "spasms," "fainting spells," and the like. Cooperation has been much better when the facts were presented early. When any medication is prescribed, we emphasize the danger of the patient missing a single dose. Knowledge of possible status epilepticus is a potent reminder. In the beginning, it must be remembered that a patient may be having a great number of minor seizures, and that these may make him forget to take his medicine at the proper time. Therefore, a member of the family should check this until it is certain that the patient is clear enough to be trusted with the medication. On the first visit, the family should be told how to treat the single seizure, how to observe such, and when to call the doctor. At varying intervals, the progress of the patient should be checked by an electroencephalogram.

Phenobarbital and sodium dilantin are the drugs most commonly used in the treatment of the convulsions. Other drugs used less frequently but quite successfully at times are mebaral, sodium bromide, glutamic acid, ergotamine tartrate, caffeine and benzedrine sulfate. Other measures used at times are the ketogenic diet, low protein diet, low salt intake and dehydration.

Fortunately the cost of medicine is not a serious problem in the treatment of epilepsy. The average monthly cost does not exceed \$3.00, except when using glutamic acid which may cost as much as \$20.00 a month.

The action of these drugs is not clearly understood. Several have a depressant effect which helps reduce the number of seizures by rendering the patient less sensitive to external stimuli. Phenobarbital apparently has a selective effect on the motor cortex, slowing up the electrical activity in this area.—*Newbill and Leigh, Virginia M. Monthly, September, 1945.*

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PREPAID MEDICAL SERVICE NOW AVAILABLE FOR THE PEOPLE OF ALABAMA

The Board of Censors of the State Medical Association, acting for the Association and subject to its approval, has laid the foundation for medical, surgical and obstetric service for the people of Alabama on a voluntary, prepaid basis. This service, strictly non-profit, is now available through the Hospital Service Corporation of Alabama (Blue Cross Plan), not only to its present members but also for any new subscribers who may be enrolled in the future.

In the latter part of 1944, special committees of the Association were sent on trips to the east and middle-west for the purpose of investigating in other states the organization and operation of their medical and surgical plans, which plans had been providing prepaid medical care expense for several years. In each instance, it was found that the plan had been organized by the medical association of the state, and was operated in conjunction with a local Blue Cross hospital service plan, both the hospital and medical care plans being completely non-profit, community services.

Contributed, by request, by Mr. Ed. S. Moore, Manager of Hospital Service Corporation of Alabama, Birmingham.

These special committees completed their investigations and made their reports to the Board of Censors of the Association with the recommendation that a non-profit, voluntary, prepaid medical care expense plan be organized in Alabama. Accordingly, the State Board of Censors, acting for the Association, decided, on March 7, 1945, to petition the Hospital Service Corporation of Alabama to furnish, on a prepayment basis, medical, surgical and obstetric care in hospitals. An agreement was reached in this connection and the Board of Censors, again acting for the Association, proceeded to secure passage of the necessary legislation to enable such service to be made available on a non-profit basis.

It was decided that such medical and surgical benefits would be provided as additional coverage under contracts already issued and to be issued by Hospital Service Corporation. Accordingly, the Act of the Legislature under which Hospital Service Corporation was organized was amended to enable the Corporation to provide medical and surgical as well as hospital service. The amendment also provided that members of the State Medical Association would be elected to the Board of Trustees of Hospital Service Corporation in order that full support and cooperation of the Association would be available in the inauguration and continued operation of the new medical and surgical plan. The following physicians, designated by the Board of Censors, were duly elected members of the Board of Trustees of Hospital Service Corporation: Dr. Carl A. Grote, Huntsville; Dr. B. W. McNease, Fayette; Dr. J. O. Morgan, Gadsden; Dr. W. Hill McCaslan, Union Springs; Dr. J. Paul Jones, Camden, and Dr. B. F. Austin, Montgomery. Drs. Grote, McNease and Morgan were then elected by the Board of Trustees to serve on the Corporation's Executive Committee, which committee directs the operation of the Corporation.

As soon as the Act was signed by the Governor, steps were taken to draft a rider for attachment to Hospital Service contracts which would provide the maximum medical and surgical benefits consistent with a reasonable premium charge. After considerable deliberation and careful study of existing plans in various other states, a proposed rider, together with a schedule of rates, was

submitted to a joint session of the Postwar Planning Commission and the State Board of Censors. This joint group gave very careful study to the entire proposition, and unanimously approved the plan as submitted, subject to certain minor changes.

The medical and surgical rider in its final form provides (briefly):

1. \$2.00 per visit by a doctor (limited to one visit per day) to his client as a bed patient in a hospital for conditions not defined as surgery or delivery of a child. Maximum of 25 visits in a contract year.

2. \$5.00 to \$150.00 for surgical operations, with a maximum of \$200.00 for the subscriber, or for each dependent, in any one contract year. \$50.00 for delivery of a child. \$100.00 for cesarean section, provided only under the family rider. Surgical benefits will be available to the member not only in a hospital but also in a doctor's office or clinic.

3. Special services rendered *in a hospital* in any one contract year not to exceed:

1. Fifteen dollars (\$15.00) for administering anesthesia.
2. Fifteen dollars (\$15.00) for diagnostic x-ray service.
3. Ten dollars (\$10.00) for radioactive treatment.
4. Ten dollars (\$10.00) for physiotherapy.
5. Ten dollars (\$10.00) for allergy tests.
6. Ten dollars (\$10.00) for special laboratory service (basal metabolism alone, \$5.00).
7. Five dollars (\$5.00) for each electrocardiogram (maximum fifteen dollars, \$15.00).

It is clearly set forth in the rider that no attempt is being made to fix or evaluate physicians' fees and that they are entitled to charge their regular fees for services rendered.

The benefits outlined above will be provided at the following rates:

Individual (non-maternity)	\$.75 per month
Husband and wife (non-maternity)	1.50 per month
Husband or wife and all children under 16 years of age (non-maternity)	1.25 per month
Husband and wife and all children under 16 years of age (including maternity)	2.00 per month

While the medical and surgical rider does not provide for visits to a doctor's office or for house calls by the doctor, it is believed that the benefits outlined therein are as liberal as, if not more liberal than, those provided by any other existing plan in the several states. The addition of these benefits to the present Hospital Service contract will enable the people of Alabama to secure al-

most complete hospital and medical protection. The availability of such overall medical service when needed is a great forward step toward the realization of a higher standard of health and well-being for the people of this state.

Medical and surgical benefits will be distributed by Hospital Service Corporation through its presently organized payroll deduction groups; through the solicitation of new groups for both hospital service and medical service; and directly to its present individual subscribers. The success of any such prepaid medical expense plan depends almost entirely on wide distribution, in order that the law of averages may have an opportunity to work. For this reason, in providing such benefits to existing Hospital Service groups, it will be necessary to enroll at least 75 per cent of each such group for medical service. The enrollment procedure for new groups will be on a similar basis, that is, a reasonable spread of risk must be obtained. This means, of course, that enrollment of members for medical and surgical benefits must proceed in a gradual and orderly manner. Careful and sound underwriting requirements, which have always characterized the growth of Hospital Service Corporation, and which are largely responsible for its successful operation, will govern the issuance of the medical rider. Every application will be examined carefully, and no person who enjoys reasonably good health will be denied hospital or medical protection.

The method of paying claims under the medical and surgical rider will be of interest to all doctors in the state. Payment will be made by Hospital Service Corporation direct to the doctor performing the service. It will be necessary for the doctor to submit his regular bill for services rendered a particular subscriber to Hospital Service Corporation, and special forms will be provided the doctors for such purpose. If the bill for services is in excess of the amount provided in the rider, it is assumed, of course, that the patient will pay the balance, but that will be a matter between the doctor and the patient. Hospital Service Corporation will keep an accurate record of each doctor's account, and on the 15th of the month will pay the total amount due for services rendered to one or more subscribers during the pre-

ceding month. A detailed itemization of the monthly account will accompany each payment, so that the doctor can readily verify the accuracy thereof, and properly credit his own patients' accounts.

It was mentioned above that the success of any prepaid medical plan depends largely upon wide distribution. This is not the only factor involved, however, and if the plan which has been inaugurated for Alabama is to succeed fully, there are some essential elements in addition to wide distribution which must prevail. First, there must and will be a policy of sound underwriting. Second, it will be absolutely essential that every member of the State Medical Association pledge his full cooperation and support of the plan. Third, constant vigilance must assure that there will be no flagrant abuse of the privileges offered under the plan. Last, and perhaps most important of all, must be the firm determination of all concerned that private enterprise can and will provide adequate medical care for the people of this state. Thus we shall do our share in forestalling that menace to free enterprise and freedom of choice commonly called socialized medicine.

In this connection, it will be interesting to note that there are now in operation in the United States and Canada 37 Blue Cross Hospital service plans, with almost 19 million members. Many of these plans have already added medical and surgical benefits to their coverage, and over 2,000,000 people have been enrolled for such care. All of the remaining Blue Cross plans contemplate the addition of medical and surgical care to their programs as soon as the necessary legal or legislative arrangements can be made. Truly, it can be said that private initiative, through voluntary prepaid expense plans, has done, and is doing, a magnificent job in providing hospital and medical care for the people of this country. And these plans are just beginning to gain momentum. For the forward looking steps that have been taken in Alabama, great credit is due the Association's Postwar Planning Commission and its State Board of Censors.

"Housewives who find use for DDT, the powerful new insecticide . . . , are cautioned against placing the poisonous powder where it might be mixed with kitchen supplies."

COL. KENDRICK HONORED

(From the September 16, 1945 *Montgomery Advertiser*)

In a ceremony at headquarters of the AAF Convalescent Hospital, Cochran Field, Lt. Col. James E. Kendrick, deputy post commander and director of medical services, received the Air Medal and the Bronze Star Medal. The presentation was made by Col. Fletcher A. Ammons, commanding officer of the installation.

Col. Kendrick, who is a native of Greenville, Ala., received the awards for service with the 10th Airforce of which he was assistant staff surgeon and then staff surgeon. He was also assistant staff surgeon at Headquarters, AAF India-Burma Command.

The citation which accompanied the Air Medal, read by Capt. Karl G. Schmidt, assistant post adjutant, was as follows: "On April 6, 1944, Lt. Col. Kendrick volunteered for a hazardous type of flight in an amphibious aircraft to the Bay of Bengal. At the time he knew that this flight would go considerable distances along the coast of enemy territory and the type of aircraft in which he was flying was subject to easy interception. This aircraft landed and took aboard nine injured members of a combat crew to whom Lt. Col. Kendrick gave medical treatment. His conduct reflects great credit upon himself and the Army Airforces."

For the Bronze Star Medal he was cited as follows: "For meritorious service from 11 November 1943 to 7 August 1944. As Assistant Staff Surgeon and later Staff Surgeon of the 10th Airforce, Lt. Col. Kendrick rendered such exceptional service in the conduct of medical matters as to improve substantially the standards of health and sanitation within this command. By his constant display of industry and medical knowledge the morale and operations of the 10th Airforce were benefited in a high degree. His meritorious service reflects credit upon himself and upon the Army Airforces of the United States."

Col. Kendrick is a graduate of the University of Alabama and came into the service at Maxwell Field as a first lieutenant. Before that time he had practiced medicine at 301 East Commerce Street, Greenville, Ala.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

B. F. Austin, M. D.
State Health Officer

HEALTH AND SOCIAL SECURITY

August 14, 1945 will live in world history as the day that brought the Japanese offer to surrender—the November 11 of the Second World War. It will be remembered by Alabamians and other Americans, as well as by residents of all the other democratic countries, as a day of rejoicing, of noise, of showers of white paper, and of deep, reverent thankfulness that nearly six years of the most devastating warfare known to the human race had at last come to an end.

But August 14, 1945 would have been a notable date in the memories of millions of Americans even if the Japanese surrender message had come 24 or 48 hours earlier or later. For August 14, 1945 was the tenth anniversary of the signing of the Social Security Act. For slightly more than a decade now that Act has been protecting our people, especially the aged, the mothers, the crippled, the blind and the young, against what the late President Roosevelt called "misfortunes which cannot be wholly eliminated in this man-made world of ours." As a spokesman for the Children's Bureau of the U. S. Department of Labor, one of the several Federal agencies administering the Social Security Program, recently declared: "The principle of government responsibility for securing the people against social and economic hazards is now well established in law and practice. This anniversary celebration is a good time to see how far we have gone since the passage of the Social Security Act and to take a look into the future."

Like other long-range programs for social betterment, this one was not entered into without considerable forethought and study. It was largely the fruit of a survey of the need for such a program and the facilities for bringing it into being which was conducted by the appropriately named Committee on Economic Security. In its report to the President this committee declared: "The core of any social plan must be the child.

Every proposition we make must adhere to this core." That obligation was kept in mind when the Social Security Act was written, and the particular needs of childhood were emphasized not only in the legislation but also in its administration. The satisfying of those particular needs was implemented by three announced purposes of the entire program: (1) the strengthening of family support by providing protection, insofar as humanly and legislatively possible, against the economic want due to unemployment, old age and death of the breadwinner; (2) economic assistance to the indigent aged and blind and to dependent children; and (3) extension of the benefits of public health and welfare programs at both the state and county levels for the benefit of mothers and children.

During the past ten years the public health agencies in this State have received approximately \$1,700,000 in Federal funds for maternity and child care programs, which have been made available on a 50-50 matching basis. That is, a dollar of Federal money is turned over to the State Health Department for its own programs and to assist counties in their maternity and child health work, with the understanding that the State will increase that dollar to two dollars. Substantial sums in Federal funds are also made available on a matching basis to the State Health Department for its general public health program on the theory that the protection of the health of mothers and infants is advanced indirectly by such specialized health services as venereal disease control, dental hygiene, nutrition, health education and sanitation. And finally Federal funds made available by the Social Security Program finance experimental health-promoting projects such as the Slossfield Health Center for Negroes in Jefferson County, the Macon County project for providing medical and hospital care for Negro maternity cases and for young Negro babies, and the training school for Negro nurse-midwives, also situated in Macon County. Although not a part of the Social Security Program as enacted in 1935, the Emergency Maternity and Infant Care Program for wives and infants of serv-

ice men is now operating as a part of that unified drive against preventable want and unnecessary waste of human life.

Although the Crippled Children's program, made possible on its present scale by Social Security funds, is not one of the activities of the State Department of Health, this Department has been glad to cooperate with the State Department of Education in this work. A representative of the Department of Education recently revealed that approximately 10,700 crippled children were then on the State register for observation and treatment. It was pointed out that the regulations require all children who have received treatment to remain on the register until they have recovered beyond the possibility of relapse or until they reach the age of 21. Alabama youngsters who have benefited from the Crippled Children's program have been victims of a wide variety of crippling and disfiguring conditions, including poliomyelitis, cleft palate, harelip, spastic paralysis, congenitally dislocated hips, club feet, extensive burns, tuberculosis of the bones and joints, injuries received at birth, and various infections which make a person different from his or her fellows. Weekly clinics are held at Birmingham, Selma, Mobile and Tuskegee, and twice a year (in the spring and fall) 23 field clinics are held in all parts of the State to reach those who are not able to attend those year-round weekly clinics.

It is true that the State's Crippled Children's program as such was not brought into being by the Social Security Program, as the State Department of Education was carrying on a limited project among this unfortunate group prior to 1935. However, had Social Security funds not been made available to expand and enlarge this work, the project aimed at giving crippled Alabama youngsters the best possible chance in life would be only a weak imitation of its present self.

Alabama has received approximately \$18,628,940 in Federal funds for public assistance and child welfare services under the provisions of the Social Security Act and conforming State legislation, according to information supplied by the State Department of Public Welfare. This sum was of course in addition to monies given for unemploy-

ment compensation, old age and survivor's insurance, vocational rehabilitation, and the already mentioned crippled children's services and activities in the field of public health.

Thanks to Social Security funds which made it possible to pay physicians, nurses and other personnel for the operation of maternal hygiene clinics in various parts of the State, nearly 10,400 Alabama women received the benefit of antepartum medical service in 1943, the latest year for which information is available. During that same year nearly 13,000 were admitted to the antepartum nursing service. Those receiving postpartum nursing service during that 12-month period, averaging 2.2 visits a person, totaled more than 9,450. More than 4,100 infants were admitted to infant hygiene medical service, while more than 18,450 were admitted to infant hygiene nursing service. Many other thousands received the benefits of preschool and school hygiene programs, dental hygiene services and well baby conferences.

A Washington correspondent of the Associated Press revealed a few days before the ten-year anniversary that America's Social Security system had paid out nearly \$8,750,000,000 in benefits to individuals and families, the aged, the unemployed, the dependent and the blind.

Congress appropriates every year approximately \$5,820,000 for maternal and child health, \$3,870,000 for services to crippled children, and approximately \$1,510,000 for child welfare services. These funds are allotted to the various states to help finance services administered by State agencies in accordance with plans which have been approved by Miss Katherine Lenroot, chief of the Children's Bureau of the U. S. Department of Labor. The maternity and child health care made possible, in whole or in part, by the Social Security Act is administered in Alabama by the Bureau of Maternal and Child Health of the State Department of Health. This aspect of the Social Security Program is administered in other states by corresponding bureaus and divisions of these states' official public health agencies.

The impetus given by the Social Security Program to the protection of mothers and

children, as well as others, against the perils of ill health, preventable illness and other misfortunes was recently described by a spokesman for the Children's Bureau, as follows:

"Every state in the Union, the District of Columbia, Alaska, Hawaii and Puerto Rico now has an appropriate agency of State Government through which the Federal government can contribute to building better health and security for children.

"Ten years ago, when President Roosevelt signed the Social Security Act, almost half the states had no special funds or less than \$10,000 for maternal and child health. Fourteen states spent less than \$3,000 a year or nothing at all for this work. Today all the states have maternal and child health divisions in their departments of health. Altogether the states in 1945 budgeted at least \$4,800,000 of their own and local money for their maternal and child-health services, in addition to the money they get from the Federal government. Ten years ago fewer than three-fourths of the states provided for the care of crippled children, and then only very inadequately and for very small numbers. Today all the states have a crippled children's agency and each year some 100,000 physically handicapped boys and girls are cared for under these state programs. Coverage is not so broad as it should be, and services are still not available for all groups of children, but in 1945, the states budgeted over \$3,000,000 from state and local funds for the care of crippled children; this in addition to the Federal funds they receive.

"In 1935 only about half of the states had child-welfare divisions in state departments administering public child-welfare services. Even in those states local services for children in the rural areas were almost non-existent. Today all the states make some kind of provision for state and local child-welfare services for children, and, as a result, tens of thousands of dependent and neglected and delinquent children are being helped through the efforts of skilled child-welfare workers."

The American people have become definitely social-security-minded during the past ten years. They will unquestionably become even more so in the years that lie ahead.

BUREAU OF PREVENTABLE DISEASES

D. G. Gill, M. D., Director

CURRENT MORBIDITY STATISTICS

	1945		E. E.*
	June	July	July
Typhoid	40	16	42
Typhus	55	75	51
Malaria	273	303	650
Smallpox	0	1	0
Measles	17	10	138
Scarlet fever	50	29	40
Whooping cough	170	98	153
Diphtheria	18	22	20
Influenza	52	20	28
Mumps	121	62	57
Polio-myelitis	28	23	13
Encephalitis	0	0	2
Chickenpox	144	7	15
Tetanus	3	0	4
Tuberculosis	251	180	298
Pellagra	1	5	31
Meningitis	25	20	10
Pneumonia	210	133	107
Syphilis	955	888	1468
Chancroid	10	8	10
Gonorrhea	1347	1192	450
Ophthalmia	0	0	1
Trachoma	1	0	0
Tularemia	1	0	1
Undulant fever	14	8	8
Dengue	0	0	0
Amebic dysentery	3	9	0
Cancer	196	179	0
Rabies—Human cases	0	1	0
Positive animal heads	60	70	...

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF SANITATION

T. H. Milford, M. S. in S. E., Director

STREAM POLLUTION

Contributed by

ARTHUR N. BECK

Sr. San. and P. H. Engineer

In the past several years stream pollution by the discharge of industrial waste and domestic sewage to streams has been widely discussed. The pollution of streams by soil erosion, however, has not received the attention that it rightly deserves. We have come to consider the discharge of waste from sewers to streams as man-made pollution, and the discharge of soils and silt to streams more or less a natural phenomenon. When and where the occurrence of soil erosion is analyzed it is easily seen that most of it is man-made.

To appreciate the extent that streams of Alabama are polluted by soil and silt, one has only to observe the Alabama, Tallapoosa, Coosa and Chattahoochee Rivers. They literally run red at times, carrying thousands and thousands of pounds of mud daily. In some areas in this State the run off in roadside ditches, small branches and creeks after

a heavy rain is extremely high in turbidity. The materials carried along in these streams eventually find their way to our larger streams, ponds and lakes, resulting in silting (mud and silt settling out) of the carrying or holding reservoirs. The condition naturally decreases the holding capacity of the reservoirs and also limits the use of streams, ponds and lakes for recreational purposes.

The indications are that the majority of the fine suspended matter comes directly from erosion on sloping land, mainly in the northern part of the State. This may be attributed largely to the continued use of improper farming measures.

It is generally conceded that the discharge of excessive amounts of the industrial waste and domestic sewage to surface waters creates local nuisances and inhibits the waters in the areas for recreational purposes. In some instances health hazards are created. Conditions so created bring complaints from riparian owners as well as others interested in the waters affected. The complaints, which may be justified, are of several natures. The main objections are from odors, unsightliness, drinking water for cattle, color and restriction of fish life. Discussions in connection with pollution of streams by municipalities and industries have been in progress for years, resulting in a general education of the public.

The seriousness of pollution of waters by industrial wastes and domestic sewage cannot be denied. Stream pollution, however, should be considered in its entirety, including that contributed by soil erosion or surface wash.

Practically all persons interested in wild life know that muddy waters do not support wild life as abundantly as clear waters, due, chiefly, to the fact that the food supply is not available. Turbid waters, among other things, inhibit the growth of microscopic organisms that are so vital to fish growth. The various forms of algae must have sunlight as these organisms are of the chlorophyl producing type. Turbidity tends to exclude sunlight, consequently suppressing growth of these essential organisms.

Turbidity in waters, when the waters are quiescent, settles to the bottom, the degree of settling depending largely upon the quietness of the body of water. When mud and silt settle, the biological life on the bottom

of the holding reservoir is disturbed and in many cases completely destroyed, resulting in the destruction of food upon which wild-life is dependent.

Waters that are high in turbidity are not adaptable to swimming, boating and other recreational use. Silt deposits along the banks and shores are very undesirable from a swimmer's standpoint. When recreation is sought on bodies of water, clearer waters with clean shores and bottoms are always desirable.

Omitting economic loss to agriculture, turbid or muddy waters are costly to hydroelectric operations, industry and domestic water works that are dependent upon surface supplies. The U. S. Department of Agriculture reports that the impounded water supplies at Albertville, Talladega, Alexander City and Auburn are silting at the rates of 2.65, 2.17, 1.41 and 1.35 per cent each year respectively. This means that the holding capacity of these basins is decreased each year from 1.35 to 2.65 per cent, or a loss of several days storage each year, which greatly reduces the serviceable life of these basins.

By comparison, the U. S. Agriculture Department lists the water supply impounded reservoirs at Birmingham and Tuscaloosa as silting at the rate of only 0.10 and 0.29 per cent per year respectively. These water sheds are largely covered in forests with little of the land under cultivation.

It is generally acknowledged that forests have a stabilizing effect on stream flow and tend to control erosion and high turbidities. Water works officials in the East have, for many years, recognized the value of preventing erosion, high turbidities and silting, and have inaugurated programs for control. These measures have been highly effective. In only a few instances in the South have such programs been developed and carried out; but where programs have been followed through, the results have been very gratifying.

The following question naturally arises: What can be done where water sheds cover many acres and land values are relatively high? Mr. Carl B. Brown, Head, Sedimentation Section, Soil Conservation Service, U. S. Department of Agriculture, tells us in an article that appeared in the May 1945 issue of *Public Works Magazine* that: "Fortunately, since 1936, a new avenue to better

water shed protection has been opening up through the locally-organized and supervised soil conservation districts. Every state in the South has enacted a soil conservation district law, and those sections of most states where erosion is a problem have already been organized into districts. The districts are governmental subdivisions of the state, controlled by landowners and farm operators and supervised by a locally-elected board of supervisors. The Soil Conservation Service and other agencies of the Federal and state governments cooperate with these districts by supplying technical assistance in farm and watershed planning for soil conservation, water conservation and drainage, and related improvements in agriculture."

Nutrition and Oral Tissues—A "normal" level of ascorbic acid in the blood is not sufficient evidence, in itself, to exclude a deficiency in the tissues. In addition, there are many instances in which a deficiency may be apparent only in a single tissue. Such a localized tissue reaction indicates that the deficiency is only a relative one, i. e., *minimal* amounts of a given food element are present so that, while no frank and typical deficiency state exists, a particular tissue using large amounts of that element may suffer from an actual deficiency when subjected to stress. Vitamin C is essential to rapid wound healing. Thus the constantly traumatized and irritated gingivae may be the only sign of a latent or sub-clinical vitamin C deficiency.

There are also many instances of endogenous deficiencies in which symptoms of a nutritional deficiency exist in spite of an adequate intake. Sometimes a defect in the absorptive mechanism can be discovered (achlorhydria, celiac disease) and sometimes a defect in transportation or storage occurs (liver damage, rat vs. guinea-pig). More recently we have begun to realize that endogenous deficiencies may occur as a result of the failure of the tissues to utilize the food elements, all other factors being normal.

Thus we are becoming more and more aware of the necessity for examining specific tissues for clinical signs of nutritional deficiencies rather than depending only upon the laboratory analysis of a blood sample. The work of Kruse and others using the capillary microscope and the slit lamp indicates that the examination of the gingivae may offer a valuable means of clinically assessing the utilization of vitamin C by the tissues—and therefore the detection of subclinical and endogenous deficiency states.—*Massler, Am. J. Pub. Health, September '45.*

"Russia's 130,000 doctors are not adequate to meet the nation's needs and to staff its expanding network of medical institutes," reports the Moscow correspondent of The Journal of the American Medical Journal.

BUREAU OF VITAL STATISTICS

Miss Ethel R. Hawley, Acting Director

PROVISIONAL MORTALITY STATISTICS

REPORTED BIRTHS, STILLBIRTHS, DEATHS FROM CERTAIN IMPORTANT CAUSES AND RATES*—

JUNE 1945, 1944, 1943

Births, Stillbirths and Causes of Deaths	Number of Deaths Registered—June 1945			Rate (Annual Basis)		
	White	Colored	Total	1945	1944	1943
Births, exclusive of stillbirths	**	**	5491	23.1	23.5	25.2
Stillbirths	**	**	161	28.5	32.7	28.6
Deaths, exclusive of stillbirths	965	823	1797	7.6	8.8	8.3
Infant deaths, under one year	106	110	216	39.3	53.7	46.9
Under one month	68	70	138	25.1	35.0	27.6
Typhoid and paratyphoid 1, 2		2	2	0.8	0.8	0.4
Epidemic cerebro-spinal meningitis 6	1	4	5	2.1	4.6	0.4
Scarlet fever 8						
Whooping cough 9	5	6	11	4.6	4.6	4.1
Diphtheria 10						
Tuberculosis, all forms 13-22	37	67	104	43.7	40.6	38.8
Malaria 28	1	3	4	1.7	1.2	2.9
Syphilis 30	7	24	31	13.0	13.7	6.2
Influenza 33	3	5	8	3.4	6.2	5.8
Measles 35					2.9	1.2
Polio 36	1		1	0.4	0.8	
Encephalitis 37			2	0.8	0.8	0.8
Typhus fever 39	2		2	0.8	1.6	0.8
Cancer, all forms 45-55	114	48	162	68.1	73.3	64.4
Diabetes mellitus 61	15	7	22	9.2	7.9	10.3
Pellagra 69	4	2	6	2.5	3.7	3.7
Alcoholism 77	3	1	4	1.7		0.4
Intracranial lesions 83	97	86	183	76.9	72.4	80.9
Diseases of the heart 90-95	213	142	355	149.3	170.2	147.8
Diseases of the arteries 96-99	20	4	24	10.1	11.6	10.7
Bronchitis 106		1	1	0.4	2.5	1.6
Pneumonia, all forms 107-109	28	33	61	25.6	38.5	26.0
Diarrhea and enteritis (under two) 119	12	12	24	10.1	17.8	23.1
Diarrhea and enteritis (two and over) 120		1	1	0.4	3.7	3.7
Appendicitis 121	12	9	21	8.8	8.3	6.2
Hernia, intestinal obstruction 122	8	11	19	8.0	7.0	7.0
Cirrhosis of the liver 124	3	3	6	2.5	5.8	4.1
Nephritis, all forms 130-132	72	70	142	59.7	70.4	76.8
Diseases of the puerperal state 140-150	2	10	12	21.2	34.1	44.5
Puerperal septicemia 140, 140a, 147	1	3	4	7.1	10.2	14.3
Suicide 163-164	9		9	3.8	4.1	7.8
Homicide 165-168	3	16	19	8.0	11.2	13.2
Accidental deaths (exclusive of motor vehicle) 169, 171-195	66	46	112	47.1	52.6	48.7
Motor vehicle 170	27	9	36	15.1	12.4	11.1
All other causes	158	107	265	111.4	153.2	131.3
Ill-defined and unknown causes 199-200	40	103	143	60.1	71.6	82.6

**Not available.

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific causes per 100,000 population; from puerperal causes, per 10,000 total births.

BOOK ABSTRACTS AND REVIEWS

The Management of Obstetric Difficulties. By Paul Titus, M. D., Obstetrician and Gynecologist to the St. Margaret Memorial Hospital, Pittsburgh; Consulting Obstetrician and Gynecologist to the Pittsburgh City Homes and Hospital, Mayview, and to the Homestead Hospital, Homestead, Pa.; Secretary of the American Board of Obstetrics and Gynecology; Commander (MC) USNR, attached to Professional Division, Bureau of Medicine and Surgery, Navy Department, Washington, D. C. Cloth. Price, \$10.00. Pp. 1,000 with 426 illustrations and 8 color plates. Third edition. St. Louis, Missouri: The C. V. Mosby Company, 1945.

The Management of Obstetric Difficulties is now in its third edition and has developed into a thousand-page volume. The book has been brought up to date to include the new therapeutic agents, but is otherwise similar in content and mode of presentation to the two previous editions. The author needs no encomiums as to his ability to write this authoritative work, designed to bring to the perplexed physician the accepted solution to his particular problem in a specialty which is always filled with fast arising difficulties. Much of the material in this volume cannot be found elsewhere. The subject matter covered includes chapters on sterility, difficulties and diagnosis of pregnancy, complications of pregnancy, complications of labor, obstetric operations, complications of the puerperium, the new born infant, and complications in general.

The many changes in obstetric practices since the appearance of the last edition of this book have necessitated a complete revision of this new volume. Additions and changes have been made in most of the chapters, but those undergoing the greatest revision are the chapters on sterility, antepartum care, general management of pregnancy, labor and puerperium. The chapter on pelvimetry has been rewritten and simplified, as has the chapter on toxemia of pregnancy. The recent enthusiasm in caudal analgesia has brought about the addition of this subject to the chapter on anesthesia. The wide use of extra-peritoneal cesarean section is now described with detailed illustrations to amplify the text. There has been added a chapter on intravenous infusions and blood transfusions which includes the subject of the Rh factor and erythroblastosis.

It is needless to say that the most prominent addition throughout the text is treatment with penicillin. This drug has made its most spectacular advances in therapeutics with the treatment of puerperal septicemia, gonorrhea, and syphilis complicating pregnancy. The dosage and technique of administration are discussed in considerable detail throughout the book.

The book is written in a pleasant style, and is in a readable print. There are many illustrations, which include many natural color photographs and also many diagrammatic sketches. There are a number of references at the end of each chapter, most being up to date, but there is also an inclusion of a good many references which are very much outdated. This book can be highly recommended to anyone who practices

obstetrics to help him handle any problems which arise in this field of medicine. This book cannot be compared with similar books for it is the only book available at the present time which includes in one volume all of the above subjects.

P. K. Burwell

Men Under Stress. By Roy R. Grinker, Lt. Col., M. C., and John P. Spiegel, Major, M. C., Army Air Forces. Cloth. Price, \$5.00. Pp. 484. Philadelphia: The Blakiston Company, 1945.

Many of us are prone to forget that fighting men are still essentially the youths they were before the draft and training camps swallowed them up and turned them into small units of a huge, overpowering machine of war-making. We are all too likely to think of them as pieces of machinery themselves, lacking the emotions that characterized them when they drove trucks, serviced automobiles at filling stations and followed a thousand other pursuits of a livelihood in peacetime. We are especially given to doing this when we think of those knight errants of the air—the flying fighters.

But we should not do so. The pilots, bombardiers and other crewmen of the bombers and fighters did not shed their normal emotional reactions when they shed their civilian clothing. They know fear in many of its most terrifying forms. They are afraid they will be "washed up" before they finish their training and receive their coveted wings. They are afraid that structural defects in their planes, traceable to careless workmanship in a factory, will bring a crash and death to themselves and their crewmates before they have a chance to engage the enemy; that they will not be able to meet the stern test of courage in the crucial minutes of the bomb run or deadly brush with the enemy; and that they will be brought down by flak or enemy fliers and taken prisoners. They suffer from nervous indigestion and many of them hardly know what sleep is on the night before a take-off over enemy territory, so greatly are they stirred by the tragic potentialities of the next few hours. They are depressed by the deaths of their comrades and the realization that, in the cold lottery of air warfare, their number may be next. They worry about their relatives at home. In brief, "sweating it out" is no empty phrase in military aviation. These men do "sweat it out" and they almost literally sweat blood.

That is what the authors of *Men Under Stress* impress upon their readers—that and the superb measures the medical authorities have been taking to prevent these emotions from leaving permanent scars on the men's personalities. The happy fact that scarred minds thus far have been relatively few is due in no small part to the devoted, almost fatherly care of the medical men who have these fighting airmen in charge.

"The Flight Surgeon assigned to the tactical combat groups is roughly comparable to the family physician in civilian medical practice," we read. "He is responsible for the general health of the combat personnel. In the pursuit of his objective, to maintain the men in as fit a condition for combat flying as possible, he functions as a public health officer, concerned with the social problems of hygiene, sanitation and morale, and also as a personal physician concerned with the individual mental and physical ailments of his men. Like the general practitioner, he is called upon to diagnose and treat a great variety of illnesses and to apply with reasonable competency a wide range of therapeutic techniques, medical, surgical and psychological. Superimposed on this broad range of interests, he has a special field of interest, that of aviation medicine, which is concerned with the characteristic effects of high altitude flying under conditions of low oxygen tension, low atmospheric pressure and rapid changes of velocity. Since these environmental stresses exert their effects primarily upon the ear, nose and throat, the cardiovascular system and the nervous and mental apparatus, the Flight Sur-

geon is by way of being a minor specialist in these fields. Nevertheless, like the family physician, if the resulting symptoms become very disabling or of grave import after attempts at therapy, he refers his patient to specialists for consultation and treatment."

The book tells about the other measures that the armed services take to protect fliers' health, both for a quick return to combat duty and for their future usefulness as citizens of a great nation. Those other procedures are described in considerable detail.

Col. Grinker and Major Spiegel have done a thorough-going job of telling what went on in the minds and bodies of the men who did more probably than any others to make victory certain. What they have to say has a particular significance for physicians, many of whom will undoubtedly treat the victims of the conditions which these experts describe. But *Men Under Stress* also makes good reading for anyone with an adult interest in the great human problems of the war.

John M. Gibson

AMERICAN MEDICAL ASSOCIATION NEWS

A. M. A. HOUSE OF DELEGATES TO CON- VENE IN CHICAGO ON DEC. 3

APPROXIMATELY 200 PHYSICIAN-MEMBERS OF
ASSOCIATION'S POLICY-MAKING BODY
TO ATTEND MEETING IN PALMER
HOUSE

The annual meeting of the House of Delegates, the policy-making body of the American Medical Association, will be held in Chicago for four days, beginning December 3, according to an announcement in the September 22 issue of *The Journal of the American Medical Association*.

The annual session, usually held in June, but delayed this year because of wartime travel restrictions, was called by Herman L. Kretschmer, M. D., Chicago, President of the A. M. A., and H. H. Shoulders, M. D., Nashville, Tenn., Speaker of the House of Delegates. The meeting, which will be held in the Palmer House, is expected to bring together approximately 200 delegates and officials of the Association, coming from all parts of the country.

During the session, Dr. Kretschmer will relinquish the presidency of the Association and will be succeeded by Roger Irving Lee, M. D., of Boston, who was chosen president-elect at the wartime session of the A. M. A. which was held in Chicago in June, 1944.

Olin West, M. D., Secretary of the American Medical Association, said that the December session of the House of Delegates would be devoted to consideration of many problems of great significance for the future of medical practice. "The House," he said, "will consider many questions related to medical services and establish policies for the medical profession. The Association is devoted to the maintenance of a high quality of medical service, a high standard of medical education, and a wider distribution of good medical care to all the people."

Because of the war, the annual A. M. A. convention could not be held in New York this year. A wartime session, attended by more than 7,000, was held in Chicago last year. San Francisco was selected some years ago to play host to the June, 1946, convention.

DOCTOR REVEALS FACTS AND FALLACIES OF HEART DISEASE

Writing on the curious superstitions, fads and fallacies of heart disease, Walter Modell, M. D., of the Cornell University Medical College, says that a growing collection of misinformation usually contributes to the

detriment and discomfort of those who have the disease.

"Heart disease is no longer mysterious," says Dr. Modell in the October issue of *Hygeia*, the health magazine of the American Medical Association. "We know a great deal about it—how to treat it and how to control it, what is required in the way of rest, diet habits, play and work. We can treat it rationally. We must not bury it under an avalanche of superstition and ignorance."

Heart disease causes more deaths today than any other disease. Dr. Modell explains that the reason for this is that people are living longer.

"Heart disease resulting from hardening of the arteries is increasing," Dr. Modell says. "Arteriosclerosis comes to all who live long enough. Today more people are living long enough for this to happen to them. But our hearts remain as good as ever." Continuing Dr. Modell says:

"The general public feels that heart disease means total incapacity, a short life, a sudden and terrible death; only cancer causes so much anguish. This is far from the truth, for the majority of patients live a long and often a useful life. What is not generally recognized is that some forms of heart disease need not interfere at all with a normal existence. Whether any or many restrictions need be placed on the patient depends on an evaluation of the true nature of the condition. This is a matter for the careful consideration of the physician only.

"Most of us insist on blaming illness on some definite, homely cause—something we ate, or a shock we received, or some family blow-up. Quite naturally, people want to know the cause of a disease so they can avoid it. In the case of heart disease virtually all the popular notions of its cause are false. It would be satisfying for the physician to be able to tell his patients what does or can cause heart disease, but this is rarely possible. In the vast majority of cases the cause is still a mystery. There is a kind of heart disease with which one is born; we do not know where to place the blame for this type. There is another kind of heart disease which develops as a consequence of hardening of the arteries; we know only that advancing years play an important role in this. Some heart disease comes as a result of high blood pressure. We do not know its cause either. Rheumatic fever

fathers a considerable amount of heart trouble. We have not yet identified the cause of this infection and we are still very hazy about its mode of transmission. Only in the heart disease which develops as a consequence of inadequately treated syphilis can we trace its origin to a particular set of circumstances.

"Many people live in terror of the term 'heart murmur'; it spells doom to them. When some parents are informed that their child has a murmur he is immediately tagged by them as a sick child with a limited outlook. He is kept under close watch, restricted in his activity, kept apart from others of his age, and turned into a hypochondriac while waiting in virtual isolation to outgrow this murmur or for the worst to happen. No matter needs clarification more urgently than that of the murmur, for the unfortunate victim of the misconception is always a child who lives under an unnecessary cloud, needlessly transformed into an invalid.

"A murmur is merely a sound. It is a sound which the physician may hear when listening for the beat of the heart. It is not the usual kind of heart sound, but it does not always mean heart disease. It is for the physician, not the layman, to determine its significance.

"For most cases of heart disease there are no special limitations of food. In general it is inadvisable to eat too heavily, or to eat so much that excessive weight is taken on. Certainly it is foolish to court digestive troubles through indiscretion. The digestive system should be kept in good working order. Occasionally, rigid restriction of the diet is necessary for the cardiac sufferer. But these programs must be carefully planned and should be carried out only under the supervision of the physician. There is no place for the self-imposed, self-devised diet in the care of heart trouble."

PENICILLIN INHALED AS A MIST CURES RESPIRATORY INFECTIONS

**INHALATION PUTS DRUG DIRECTLY INTO SITE OF
BACTERIAL INVASION; ADMINISTERED
THROUGH MOUTHPIECE OR MASK**

A highly concentrated solution of penicillin, inhaled as a mist, has brought complete relief to persons suffering from bacterial infections of the respiratory tract.

Herbert N. Vermilye, M. D., of Forest Hills, N. Y., in the September 22 issue of *The Journal of the American Medical Association*, reports the successful treatment of more than 200 patients with the inhaled drug known as "aerosol penicillin."

The conditions treated successfully include pneumonitis, tonsillitis, sinusitis, sino-bronchitis, pharyngitis, and bacterial asthma. These conditions all have a common denominator—the bacterial invasion of the respiratory tissues.

Aerosol penicillin has many advantages over the method of administration by injection into a muscle or vein, especially when bacterial invasions of the breathing apparatus are under treatment. With the injection method, frequent muscular or venous injections are necessary. This usually means that hospitalization and continual medical supervision with nursing care are essential. However, none of this is necessary with aerosol penicillin, since it may be easily administered in the home or in the doctor's office through a mouthpiece or oxygen mask.

Another advantage is that inhalation of penicillin mist introduces the drug directly into the site of bacterial invasion and produces a high local concentration at the point of the infection. Dr. Vermilye emphasizes the fact that aerosol penicillin was repeatedly found to control infections of the upper respiratory tract which were not cured by penicillin injections or which relapsed after its use.

The author stated that in an epidemic of an unclassified virus disease of the upper respiratory tract during the late winter months of the past year, aerosol penicillin was used to good effect. "While the virus infection itself was probably not influenced by the drug," the doctor pointed out, "the patients frequently were definitely benefited because secondary bacterial infections did not arise to complicate the original disease. Many patients appeared to be well after treatment for one or two days although penicillin was continued for about five days. Perhaps one factor in the rapid recoveries was the general feeling of well being and the increased appetite which accompany aerosol penicillin treatment. Similarly the duration of colds has been repeatedly shortened because of the elimination of secondary bacterial invasions."

Dr. Vermilye adds that "the administration of penicillin by inhalation is suggested as a valuable substitute for the usual technic. It is an adaptable method, useful in the home by untrained persons and in the office. It can be utilized for continuous or intermittent administration of penicillin in severe as well as in less dangerous chronic infections, in which from three to five treatments during the day apparently are sufficient to effect removal of the infection."

FIND DRUG MAY BE BENEFICIAL IN TREATMENT OF LEUKEMIA

Colchicine, a drug derived from the seed of the meadow saffron flower which grows abundantly in Europe and North Africa, has been found to have a beneficial effect in the treatment of acute myelogenous leukemia, a highly fatal disease.

W. Harding Kneedler, M. D., of Philadelphia, writing in the September 22 issue of *The Journal of the American Medical Association*, says that while no conclusions can be drawn as yet regarding the degree of beneficial effect of colchicine in this type of leukemia, "further trial of the drug for the condition seems justified."

Leukemia is a fatal disease characterized by the presence in the blood of numerous white cells, many of which are immature. The cause is unknown. In the acute type, ulcerative inflammation of the mouth or throat often marks the onset. Hemorrhages are common.

In the case reported by Dr. Kneedler in *The Journal*, colchicine was given in tablet form three times a day. The progress of the disease soon became less rapid, then improved. After losing 58 pounds, the woman patient showed a progressive gain in weight and strength. Transfusions were unnecessary for an eight month period.

After suffering several hemorrhages, the patient finally died.

Commenting on the treatment, Dr. Kneedler said that "colchicine was continued through the course of the disease, certainly without harmful effect and perhaps with actual though temporary benefit." He urged additional investigation.

Dr. Kneedler reported that Dr. O. H. Perry Pepper, also of Philadelphia, tried the drug in two cases of acute leukemia. It had no apparent effect in one case, but in the

other there was complete halting of development for a while. "When relapse occurred the drug was resumed, but the further course of the disease was as would have been expected without the drug," he said.

REPORT DRUG THIOURACIL NOW CURES THYROID GLAND INFLAMMATION

Two Seattle physicians report that the drug thiouracil, which previously has been used in toxic goiter, has been employed successfully in the cure of thyroiditis—a general inflammation of the entire thyroid gland.

In The Journal of the American Medical Association for September 22, Dr. Brien T. King and Dr. Leo J. Rosellini state that out of 11 cases diagnosed as thyroiditis and treated with thiouracil, eight were symptom free in one week, and in all the gland enlargement completely disappeared.

Previous treatment of this thyroid inflammation has included iodine, rest, hot applications, ice bags and x-ray. The sulfonamide drugs have been tried but so far they have been of little benefit. Prior to September 1944, the only treatment that definitely seemed to shorten the course of the disease was x-rays.

In describing the disease, the authors stated that in a considerable percentage of all cases there had been a history of recent mouth or throat infection. The disease is usually of sudden onset, occurring in a previously normal gland or one slightly enlarged. They emphasize the fact that they have not seen it develop in a previously existing goiter of any type. It is associated with slight to moderate enlargement of the thyroid gland, which is usually quite tender and painful.

GROWING ALCOHOLISM ENDANGERS NATIONAL HEALTH AND SECURITY

**JOURNAL AUTHORS BELIEVE THAT PERSONALITY
DISORDERS AND EMOTIONAL STRAINS
LEAD TO HEAVY DRINKING**

Estimating that there are approximately 600,000 chronic alcoholic addicts, 2,000,000 heavy drinkers and about 38,000,000 social drinkers in this country, two authors point out in the October 6 issue of The Journal of

the American Medical Association that "alcoholism in America is a serious national health problem."

Robert V. Seliger, M. D., Assistant Visiting Psychiatrist at Johns Hopkins Hospital, and Executive Director of the National Committee on Alcohol Hygiene, Inc., Baltimore, and his collaborator, Victoria Cranford, Psychotherapist, Haarlem Lodge Sanatorium, Catonsville, Maryland, believe that the trend toward heavy drinking in the last quarter of a century is a product of our present culture with its strains and tensions on the emotions.

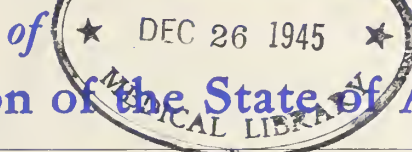
Criminal action, although it does not originate with alcoholism, is motivated by the same warped personality traits and inability to adjust to the environment. Since heavy drinking leads to temporary relaxation of judgment and control, criminal acts against society may be committed under the influence of liquor. Commenting on the relationship between alcohol and criminal behavior, the authors say:

"In general it has been our experience that criminal offenses against society are committed by individuals with poorly integrated personalities, emotional instability, conflicts with the environment and frustration; these are also found in many alcoholic addicts whose drinking is symptomatic of their inability to adjust themselves realistically to the environment and its demands on them."

The alcoholic addict should be regarded as a sick person, in the opinion of the authors, and treatment should be given by "re-educating the individual, helping him to establish new habits of living, thinking, action and reaction to excitement, disappointment or out and out frustration."

Society must assume its responsibilities, the authors emphasize, and "preventive measures on a broad basis should definitely, therefore, incorporate ways and means of helping to modify or change our social environment so that it will not tend to stimulate the production of anxiety and tension but rather will tend to provide relative security and support through healthy community living."

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BACKGROUND

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of

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THIOURACIL IN HYPERTHYROIDISM

EARLE DRENNEN, M. D.
Birmingham, Alabama

In 1943 Astwood first reported the use of thiouracil which he gave to three patients with hypothyroidism. The result in these three cases was striking and signaled the first great advance in drug therapy in this field since the giving of iodine by Plummer in 1922.

The effect of thiouracil has been much more striking and much more definite than was ever the case with iodine. In less than a week the hyperthyroid patient taking thiouracil in proper doses feels a distinct change for the better. There is a sensation of well-being, nervousness is lessened, the heart rate begins to slow, the patient gains weight, and there is also a definite drop in the basal metabolic rate. In some cases, this sensation of well-being is remarkable. However, if the patient has been taking iodine and there is still a considerable amount of iodine in the system, thiouracil does not have a definite effect. The effect is more noticeable if the patient has not been taking iodine. On the other hand, if the patient is saturated with iodine, there is a delay in improvement, and particularly the basal metabolic rate does not drop so rapidly.

In the average case, the basal metabolic rate drops about one point a day, so that plans for operation can be confidently made ahead of time. In other words, toxic patients with a basal metabolism plus 50 will require about fifty days' preoperative treatment before the optimum time for operation. The drug is equally effective in all types of toxic goiter, whether diffuse or nodular.

Read before the Calhoun County Medical Society, Anniston, June 19, 1945.

We have been unable to determine any definite enlargement in the size of the gland under treatment of the drug, although it induces hyperplasia of the epithelium. Certainly it is true that the larger the gland the longer it will take for the metabolic rate to fall to normal. We have found that in all cases the basal metabolism can be brought to normal by the continued exhibition of thiouracil. This is a great advance over iodine therapy, because it permits the complete operation to be done in one stage with perfect safety to the patient.

Through the kindness of Dr. S. M. Hardy, of the Lederle Laboratories, we have obtained a sufficient supply of thiouracil for the past year and have treated to date fifty-five patients for toxic goiter. All of these have been private patients, and we have given it to no patient with a basal metabolism less than plus 20. Those cases showing mild toxicity have been treated along the old lines with iodine. In this series of cases we have not tried to cure any patient medically, but have used the drug wholly as a method of preparation for operation.

Of the 55 cases in our series, 46 have been operated on. For the most part, we have used only 0.4 of a gramme daily; but in most of the very toxic cases, we have given them 0.6 of a gramme daily; that is, 0.2 of a gramme every eight hours, and as soon as the basal metabolism has had a definite drop, we have changed the dosage to 0.2 of a gramme twice a day.

In those patients whose weight was less than 115 pounds 0.4 of a gramme daily was sufficient. We have observed that patients who have been taking iodine a short time before administration of thiouracil have not

responded quickly to the drug. There has been a distinct delay in improvement, particularly in the basal metabolic rate. The average time required for getting a patient in good condition has been about five weeks. In some the basal rate has dropped from plus 30 to 0 in less than three weeks, and we have had one that required more than five months to prepare. This was a nodular toxic goiter in a patient who had long been taking iodine.

Dr. Hardy has warned against giving more than 0.6 of a gramme to a patient per day, and we have never violated this rule. In this series there have been three patients who have had drug fever reaction. One was in a woman of 62 who had been taking iodine for more than two years on the advice of her physician. She had been taking twenty drops daily. When first seen, the basal metabolism was plus 16. She was taken off of iodine for two weeks and no medication given. At the end of that time her basal metabolic rate had risen to plus 31. Thiouracil was then administered for two weeks and the basal metabolism fell to plus 15. On the sixteenth day she was taken with an attack of aching muscles, lassitude, and fever of 102. She said she felt as though she had "flu." Her throat was not sore. Fever lasted three days and she felt well again. Two weeks later, she took two tablets, 0.2 of a gramme of thiouracil, and five hours later she had a similar attack of fever, temperature rose to 102, and remained up for three days. It was deemed unwise to administer thiouracil to this patient. Her treatment was continued with iodine and she went through a two-stage thyroidectomy without trouble.

Another patient had a severe sore throat, which showed cultures of streptococcus. This patient was treated by her physician with sulfonamides, and the thiouracil was stopped for two weeks. The patient is now taking thiouracil again with good effect.

There have been two cases of leukopenia, the white blood counts being respectively 3,600 and 2,900. In both these cases the thiouracil was stopped, and as the basal metabolism had fallen below plus 20 the patients were put on iodine and operated upon without further treatment of thiouracil.

One of the effects of thiouracil has been to produce hyperplasia of the epithelium.

The first patient prepared with thiouracil and operated on oozed and bled to such an extent that operation was difficult. This has been overcome by the administration of Lugol's solution, ten drops three times a day, the last three weeks of the preoperative period. Ten days before the operation, we have made a practice of discontinuing the thiouracil entirely and to continue the iodine alone up to the time of operation. The proper preoperative preparation of the patient also includes high caloric diet, rest in bed, and the building up of the blood with iron and liver, if anemia is present. Vitamins are also given. Stimulants, coffee, tea, alcohol, and cola drinks are forbidden entirely. For the past four months we have been giving patients pyroxidine or vitamin B₆ in doses of 50 milligrams per diem. Dr. Spies, of the Spies Clinic here in Birmingham, recommended this some years ago in the treatment of agranulocytosis. We have not been impressed by pyroxidine since leukopenia recurred while it was being taken.

So far there have been fourteen deaths reported in the literature from the administration of thiouracil, due chiefly to agranulocytosis. Undoubtedly, there have been others unreported. Reading the details of some of these fatal cases, it would seem that they were given larger doses over a longer time than is now recommended. Two were already in desperate condition. One patient came in to the hospital in diabetic coma with hyperthyroidism. Another treated medically had the metabolism depressed to minus 20 or lower on different occasions over a period of several months.

In order to safeguard these patients, it is absolutely essential that they report at least every fourteen days for a complete check of blood and urine, at this time giving particular attention to the leucocytes. Every patient should be warned to stop taking thiouracil if a sore throat or fever develops. We have had these come to the office where we could see them at once.

The great advantage of thiouracil over iodine is that in every case the basal metabolism can be brought to normal. There will be an accompanying improvement in the heart and general body functions, and the thing of greatest importance to the patient is that the operation can be done safely in one stage. Under iodine preparation, in some of the most toxic cases, it has been nec-

essary to operate in stages, taking two or three different operations in order to safeguard the patient. Of the 46 patients prepared with thiouracil, all were operated upon in one stage. None showed any marked postoperative reaction, and all made uneventful recovery.

We have had two cases of skin rash which were not observed by us, but it was not necessary to stop the administration of thiouracil.

It is hoped that physicians seeing goiter patients first will not give them iodine. Then they may have a better and quicker improvement when treated with thiouracil. The iodine does no particular harm but simply delays the actions of thiouracil and drags out the preoperative period.

Case histories of three typical cases follow.

REPORT OF CASES

Case 1: Mrs. H. W. T., a white female, 43 years of age, was first seen April 16, 1945. She gave a history of having had a goiter for the past fourteen months, being very nervous, and having lost ten pounds during the last three months. She had been taking iodine, about fifteen drops daily, since last September. She appeared quite toxic, having a BMR of plus 73. Both lobes of her thyroid were diffusely enlarged, her heart rate was rapid, and she had marked tremor of her hands. Her WBC was 5,350, and she had a hemoglobin of 75%. She was put on thiouracil 0.4 grammes daily. On May 2, her BMR had dropped to plus 33. On May 21, it was plus 29. On June 6, it came down to plus 22, but her WBC had dropped to 2,900. Thiouracil medication was discontinued immediately, and she was given jeculin capsules and vitamin B₁₂. Her blood count was checked again on June 11, and it was 5,500 then. On June 23, 1945, she underwent a subtotal thyroidectomy in one stage and made an uneventful recovery.

Case 2: Miss E. C., a white female, 29 years of age, was first seen on May 16, 1944. She gave a history of having been nervous for the past two years. Five months ago she had noticed a goiter; since then she had lost about five pounds. She had been taking thirty drops of Lugol's solution during the last three weeks but did not feel better. There was considerable diffuse enlargement of her thyroid gland, which was very hard. She exhibited a pronounced exophthalmos, and there was a fine tremor of her hands. Otherwise, the physical findings were essentially negative. Her weight was 123 pounds. Her BMR was plus 58 on June 1. She was put on thiouracil and took 0.6 gramme daily. Her BMR dropped to plus 45 on June 29; it was plus 29 on July 28; plus 33 on August 11; 0 on September 5. Her weight had increased to 152 pounds, a gain of 29 pounds. Her blood count and urine were checked at intervals of two weeks. Her hemoglobin rose from

75% on May 16 to 80% on September 5; the leukocyte count was 8,500 on May 16, it dropped to 5,400, with a normal differential count, on September 5. A trace of albumin was found in the urine on July 14 and 28, and there were some occasional pus cells; all other findings were negative. On September 7, 1944 a subtotal thyroidectomy was done under novocaine infiltration anesthesia. The pathologist reported a diffuse goiter with lymphocytosis (toxic). The patient left the hospital after an uneventful recovery. Her BMR rechecked one month after the operation was minus 8; her weight was 148 pounds and her subjective condition was excellent.

Case 3: P. M., a white male, 52 years of age, began to complain in August 1944 of weakness, swelling of his feet, pain in the chest, and rapid heart beat. Both lobes of his thyroid were enlarged. There was auricular fibrillation of his heart, slight edema of the ankles, and he also had a large right inguinal hernia. His BMR was plus 24. He was treated with digitalis (1½ grains t. i. d.) and quinidine (3 grs. t. i. d.) and began to take thiouracil on September 1. His basal metabolic rate was plus 29 on September 14; it dropped to plus 15 two weeks later, and to minus 2 on October 11. His weight increased from 132 pounds on August 29 to 160 pounds on October 11, although his edema had disappeared. On October 31 a subtotal thyroidectomy was done under novocaine infiltration anesthesia. A diffuse goiter with lymphocytosis (toxic) was reported by the pathologist. The patient stood the operation well. He was seen again six weeks after the operation and appeared to be in excellent condition. Six months later he remains entirely well.

SUMMARY

1. Thiouracil has been used in the preparation for operation on 55 patients with thyrotoxicosis.
2. It is very effective in causing and maintaining a remission in both the diffuse and nodular types of toxic goiter.
3. It is far superior to iodine in that patients prepared with thiouracil lose their toxicity and go through the operation without reaction.
4. The tendency to oozing and bleeding at operation in patients prepared with thiouracil has been overcome by administering iodine during the three weeks just preceding operation.
5. The only serious complication caused by thiouracil is agranulocytosis, and this seems comparatively rare.

ANNUAL MEETING
OF THE
ASSOCIATION
BIRMINGHAM
APRIL 16-18, 1946

MARION SIMS AND OTHER 19TH CENTURY PIONEERS THE DAWN OF SCIENTIFIC MEDICINE AND SURGERY

SEALE HARRIS, M. D.
Birmingham, Alabama

Oliver Wendell Holmes. Another of the pioneers searching for light and not afraid to tell the truth was Oliver Wendell Holmes, who was born in Boston in 1809, four years before the birth of James Marion Sims. Holmes' great contribution to medicine was in 1843 when he proved that childbed fever is a contagious disease, and that it was transmitted from patients with puerperal fever, erysipelas and infected wounds to women in labor through the medium of the hands and clothes of doctors and midwives. That was two decades before the Hungarian-born Ludwig Semmelweis (1818-1865) began to investigate the appalling conditions in the obstetrical wards of Vienna hospitals and to search for causes of the frightful death rate among women confined in them. It was more than a quarter of a century after Holmes' paper on puerperal fever was published before Pasteur proved his germ theory of disease.

Holmes reported a number of small epidemics of "childbed fever" in the practice of individual doctors. He admitted his belief that he, himself, had been responsible for the death of women whom he had delivered. He advocated thorough cleansing of the hands and a change of clothes before attending any woman in labor; and asserted, with emphasis, that a physician who was treating a case of childbed fever, erysipelas or an open wound should not be permitted to attend a woman in labor.

Holmes' paper made but little impression on the medical profession generally; but it brought forth the condemnation of the obstructionists to medical progress, particularly Dr. Charles Meigs, Professor of Obstetrics in the University of Pennsylvania. Meigs condemned Holmes' article as a reflection on the cleanliness and integrity of doctors, and he ridiculed his theory in general. Holmes' reply, characteristically rhetorical, scintillated with satire. Apparently the controversy between Holmes and Meigs created a sensation in medical circles at the time; but the reforms advocated by Holmes,

intended to reduce the number of deaths from puerperal fever, were not taken seriously by American physicians; and only he, his friends and admirers carried out his methods.

• *Ludwig Semmelweis.* Apparently Holmes' theory of the contagiousness of puerperal fever was unknown to European doctors when Ludwig Semmelweis, in Vienna, in 1847-1849, attacked the "childbed fever" problem with a different approach. He proved that medical students who worked in dissecting halls before attending charity cases of obstetrics were largely responsible for the high mortality in the lying-in wards of hospitals connected with the University of Vienna. Semmelweis also proved that the dirty linen and filth in hospital wards were factors in disseminating puerperal fever. He was demoted because the reforms he advocated would cut off petty graft in the hospital laundry; but not until he had called attention to the fact that in the wards in which medical students worked there were from 68 to 158 deaths in each 1,000 births, while in another ward in which the women were delivered by midwives the mortality rate was 33 deaths in 1,000 births. The great Viennese doctor finally concluded that puerperal fever in Vienna hospitals was due to blood poisoning, transmitted by the unclean hands of medical students, midwives and doctors, and by the use of dirty linens, and the generally filthy conditions in the lying-in wards of the hospitals.

Semmelweis, like every other man who has brought about benevolent reforms, was persecuted for being a progressive. His envious and jealous Vienna confreres made every possible effort to destroy him, but he succeeded in having the obstetrical wards renovated. He saw to it that they were supplied with clean bed-linen; that women were required to bathe, and that they were provided with a freshly laundered gown, at the beginning of labor. He instructed medical students not to go from dissecting rooms to the obstetrical wards of the hospital without a complete change of clothes; and he required each student to wash his hands thoroughly with soap and water and then in a

This contribution is being published in three parts. The first installment appeared in the October number.



The James Marion Sims Memorial

ERECTED ON THE CAPITOL GROUNDS IN MONTGOMERY AND PRESENTED TO THE STATE OF ALABAMA
BY THE STATE MEDICAL ASSOCIATION ON APRIL 19, 1939

solution of chloride of lime before making examinations of women in labor.

At the time Semmelweis began his reforms, approximately one out of every eight women who were delivered of babies in the Vienna hospitals died of puerperal fever. In seven months the number of deaths in the same obstetrical wards dropped to one in eighty-five women delivered. In one hospital division there was not a single death from puerperal infection in two months. In spite of his triumph in saving the lives of parturient women, Semmelweis tired of the struggle, and disgusted with the tactics of his confreres, left Vienna and returned to his native city, Budapest, in 1801. There he wrote a book, *"The Aetiology, Concept, and Prophylaxis of Childbirth Fever,"* which gave to the world methods of preventing puerperal fever—essentially asepsis in the management of labor—that revolutionized the practice of obstetrics and has saved the lives of millions of mothers. Semmelweis died at the age of 47, from septicemia resulting from an infected finger—the disease which he sought to prevent in mothers as they brought their children into the world. Semmelweis' life was turbulent and unhappy. He died without realizing that he had achieved more for the good of mankind than all of the Kings, Queens and Emperors of Austria and Hungary. His name will be revered when Maria Theresa, Francis Joseph, and all the other rulers of the House of Hapsburg have been forgotten.

Sims, the Father of Gynecology. Marion Sims' greatest achievement, though not his only important contribution to scientific surgery, was in devising an operation for vesicovaginal fistula, then considered an incurable condition. The scientific management of diseases of women had its origin in Montgomery, Alabama, when the Sims speculum was invented. It gave the surgeon perfect visualization of the vesicovaginal and rectovaginal septa, and the cervix of the uterus. Without this discovery the accurate diagnosis and adequate treatment of diseases of women could not have been possible.

Sims' simple story of the incidents that led up to his undertaking an operation for vesicovaginal fistula, the delineation of his failure for four years, and the final success of his efforts to relieve this hitherto hopeless condition makes one of the most thrill-

ing chapters in medical literature. It was an accident that Sims, in the course of six weeks, was called upon to treat three cases of vesicovaginal fistulae in slaves, who, because of their disability, were hopeless invalids and valueless to their owners; but the perfection of the operation was the result of definite ideas of the problems involved in devising a cure for vesicovaginal fistula, combined with infinite patience, courage and perseverance.

The success of Sims' operations for vesicovaginal fistula depended upon his ingenuity in devising a number of instruments and in perfecting procedures in vaginal surgery that never before had been accomplished. The first step followed the accidental discovery, in the examination of a woman who had been thrown from a horse, that atmospheric pressure will balloon the vagina so that the vesicovaginal septum may be clearly visible for operation. Sims first used the handle of a pewter spoon to open the vagina to atmospheric pressure, and to hold it open; and then he invented his speculum, which has not been improved up to this time. He then devised a retention catheter to drain the bladder and prevent its distention by urine. The third step was to use the silver wire suture instead of silk; and the fourth was the use of perforated shot to hold the sutures in place.

It required several failures in operating upon Anarcha, Betsy and Lucy before improved methods had corrected the faults in technic of former operations; but Sims did not despair as did his associates and some of his relatives, who begged him to devote himself to patients who could pay instead of breaking down his health from overwork in quest of the impossible. But genius is not easily discouraged, and Sims continued until May 1849, when, with "palpitating heart and anxious mind," he found that he had cured Anarcha—the first time in the history of the world that an operation for vesicovaginal fistula had been performed successfully.

Sims' exuberant gratification at his success was pardonable. It was expressed as follows: "In the course of two weeks more, Lucy and Betsy were both cured by the same means, without any sort of disturbance or discomfort. Then I realized the fact that, at last, my efforts had been blessed with success, and that I had made, perhaps,



Dr. Sims' home in Montgomery, Ala. before he went to New York in 1853.



Dr. Sims' home at Mt. Meigs, Ala., before he moved to Montgomery in 1840. The small building in the rear is where he had his office.



Office of Dr. Marion Sims in Montgomery, Ala., from 1840 to 1853. - "I had a little hospital of eight beds, built in a corner of the yard, for taking care of my negro patients and for negro surgical cases; and so when Lucy came I gave her a bed. Here Lucy, Betsy and Anarcha were the first patients experimented upon and cured."
— STORY OF MY LIFE.

one of the most important discoveries of the age for the relief of suffering humanity."

Slave Heroines. It was fortunate for Sims that his first three patients, Anarcha, Betsy and Lucy, were negro slaves, who by heredity and environment made ideal subjects for experimental studies such as he carried out on them for four long discouraging years. Sims performed thirty operations without an anesthetic on Anarcha alone before she was cured. Livingston maintained that the negroes in their native Africa stood pain better and endured punishment of all kinds with greater fortitude than civilized people; and Rudolph Matas, Hunter McGuire and other surgeons have stated that the American negroes were stoics in standing pain and that they made better surgical subjects than the whites. The training as slaves made Anarcha, Betsy and Lucy submit without question to the commands from their masters to allow Dr. Sims to perform any necessary operations; and the hope of relief from the dreadful condi-

tions resulting from vesicovaginal fistula no doubt made them willing subjects for experimentation. Many Europeans berated and ridiculed Sims for alleged cruelty to helpless slaves.

Sims relates that Anarcha, Betsy and Lucy had kind masters; and it is likely that Sims treated them with as much consideration as he did his patients the Duchess of Hamilton, the Empress Eugenie' of France and the Empress of Austria. Sims maintained these three slaves in his hospital and treated them for four years without pay or hope of reward, other than the satisfaction of curing them of the most dreadful condition known to woman, and the hope that he might find the way to relieve others. After many failures Sims was discouraged, but Anarcha cried and begged him to "please try one more time." Never in history has there been another instance of such devotion to duty and the cause of science. Anarcha, Lucy and Betsy should be immortalized as the first heroines in the story of the develop-

ment of modern gynecology; just as Jane Todd Crawford, of the pioneer days of Kentucky, will be revered always in the memory of men and women along with Ephraim McDowell, the founder of abdominal surgery.

Claude Bernard. When Marion Sims was in Paris from 1861 to 1870 the French capital was the medical center of the world. Among the great Frenchmen of the time was Claude Bernard, the aristocrat in medicine. He was born in 1813, and therefore, like Marion Sims, was forty-eight years of age in 1861. Claude Bernard was working in the most complete physiological laboratory in the world at that time, except perhaps that of Karl Friedrich Wilhelm Ludwig (1816-1895) of Leipzig, Germany, whose vast studies on circulation supplemented that of the great Harvey.

Claude Bernard accidentally found sugar in the hepatic vein of a man upon whom an autopsy had been performed. This he interpreted as meaning that the liver produces, stores and releases glycogen, which, when carried in the blood to every part of the body and burned, produces heat and energy—and he proved his premise. His studies on diabetes stimulated many other laboratory investigations to seek for the cause of that fatal disease. Those studies culminated in Von Mehring and Minkowski producing diabetes mellitus in dogs by removing the pancreas in 1888; and the discovery of insulin by Frederick Grant Banting, an obscure Canadian doctor, and his co-worker, Charles Herbert Best, a sophomore medical student, in the physiological laboratory of the University of Toronto in 1921. Thus scientific medicine conquered a disease that baffled physicians from the time when Aretaeus, the Cappadocian, first described and named diabetes mellitus in the second century of the Christian era. Claude Bernard was the pioneer in blood chemistry and in physiological investigations in nutrition.

Virchow. Rudolf Virchow (1821-1902) was the noblest German who has lived, and one of the greatest men of all time. He accomplished more to develop scientific diagnosis of disease as now practiced than any other of the great pioneers of his time. Before Virchow was thirty-five years old he had completed microscopical studies on the

tissue cells of various organs that led to a comprehensive knowledge of disease processes. He developed methods of diagnosis which made the microscope and laboratory indispensable in medical and surgical practice. When his greatest work, *die cellular pathologie*, was published in 1856 it changed the physician's concept of disorders of the human body from guesswork to exact knowledge of the marked changes that take place in disease. Virchow lived to know that laboratories, equipped to use his methods of tissue diagnosis and study of disease, were established in every large hospital in all the civilized nations of the world.

The late Sir Frederick Banting, who achieved fame in his brilliant researches that culminated in the discovery of insulin, said that the Germans can be credited with few original ideas, and that they discovered scarcely one basic principle; but they were masters in developing, and improving upon, the ideas which they appropriated from others. Virchow developed cellular pathology into a science; but the idea originated in the discovery by Robert Hooke, in the 17th Century, that plants are made up of microscopic cells. In 1815 Robert Brown, a botanist, discovered a nucleus in each cell. Bichat, French anatomist, made the first microscopic studies of animal tissue under the microscope in the 18th Century. He described twenty-one distinct types of tissues, or "membranes." Bichat concluded that "disease must ultimately be some change in one or more kinds of tissue."

Schleiden, of Hamburg, in 1838 confirmed the work of Robert Brown and expressed the belief that the nucleus is essential for the reproduction of like cells in plants. Theodor Schwann extended the work of Schleiden and proved that "all vegetable and animal tissues are composed of and developed from cells." Hagensen and Lloyd, in "*A Hundred Years of Medicine*," assert that "it was Rudolf Virchow, the most influential of all Germany's medical thinkers, who applied the discoveries of Hooke, Schleiden and Schwann to the intimate study of disease." Virchow must be credited with developing the science of pathology.

Virchow was a humanitarian, and therefore did not please German officials when, in 1848, he was sent to Upper Silesia to investigate the causes of an outbreak of relapsing fever. He reported the miserable

living conditions and the semistarvation of the inhabitants in a German province, and incurred the wrath of Prussian overlords. As a result he was forced to give up work in his Berlin laboratory. However, he continued his studies as Professor of Pathology at Wurtzburg, where, in 1856, he had achieved such distinction that he was invited to become Professor of Pathology in the University of Berlin.

In 1880 Virchow became a member of the Reichstag, where he failed in combatting the deadening *Deutschland uber alles* dream of Bismarck. Unfortunately for a potentially great people the Germans followed the leadership of the "Iron Chancellor" instead of adopting the humanitarian principles advocated by Rudolf Virchow. That mistake in following the wrong leadership was the beginning of the end of Germany as a great nation.

Pasteur. Measured in terms of lives saved and in promoting health, happiness, efficiency, prosperity and long life among civilized people, Louis Pasteur (1822-1895), a French chemist, was the greatest man who has lived. While not a physician he discovered that micro-organisms (germs, microbes, bacteria and viruses) cause disease of wine and silk-worms, chicken cholera, anthrax and hydrophobia (rabies). In 1863 Pasteur said to Emperor Napoleon III of France: "My ambition is to arrive at the knowledge of putrid and contagious disease." His ambition was fulfilled; and the knowledge which Louis Pasteur acquired, that no man had ever dreamed of before, he applied in the prevention of contagious diseases; first of wine, then of silk-worms, chicken cholera, anthrax in sheep, and rabies in dogs and hydrophobia in man.

In the prevention of sepsis in wounds Joseph Lister, in 1866, applied Pasteur's proved theory that micro-organisms in the air cause putrefaction. Louis Pasteur was the founder of scientific medicine and surgery; and the prevention of all communicable diseases is based upon the principles which he discovered. The average length of life has been increased by approximately thirty years—nearly doubled—since the prophylaxis of diseases, medical and surgical, based upon Pasteur's germ theory and his principles of vaccination, have been applied in all civilized countries.

Pasteur's first great achievement was in proving that micro-organisms in the air are the cause of fermentation. He found that by heating wine to near the boiling point and keeping it in bottles from which air was excluded further fermentation into vinegar would be prevented. He proved that putrefaction could be prevented by heating meat and meat broths and keeping them in closed containers from which air was excluded. He also proved that the fermentation of milk and butter could be prevented by the same process. This principle—what is now known as pasteurization—when applied saved the wine industry in France from ruin. Applied to the prevention of diseases which may be carried in milk (tuberculosis, typhoid fever, undulant fever, dysentery, and other bacterial diseases), pasteurization has been a large factor in reducing the general death rates. The first ten years in which pasteurization of milk was required by law in New York City the death rates of children under five years of age were reduced by twenty-five per cent.

In examining drops of fermenting wine under the microscope, Pasteur found them teeming with minute bodies which he called micro-organisms. He placed a few drops of fermenting wine into wine that had been treated, and in a few days, when a drop was placed under the microscope, it was a seething mass of micro-organisms. He concluded that the minute cells, which he had seen under the microscope, were living things and that they were the cause of fermentation. From this he deduced his famous dictum, "life springs from life," and therefore there was no such thing as spontaneous generation of life.

Having solved the problem of "sick wines," Pasteur was called upon to study an epidemic in silk-worms which threatened to destroy the great silk industry of France, centered at Lille. He worked for five long years studying sick silk-worms. He found micro-organisms in the bodies of the afflicted worms, which he believed to be the cause of two diseases, *pebrine* and *flacherie*; and he advised methods of prevention which, when applied, ended the epidemic and saved many millions of dollars a year to growers of silk-worms and manufacturers of silk.

Fielding Garrison, in his monumental history of medicine, said: "Pasteur suffered from the cavillings of lesser men." Unfor-

tunately he was forced to give time to bitter controversies when he wanted to be working on important problems. Liebig of Germany attacked his dictum of "life springs from life"; and in France Felix-Archimede Ponchet defended the theory of spontaneous generation of life. The controversy continued for several years when Pasteur, in a masterly presentation of his studies on fermentation and putrefaction, persuaded the Academy of Sciences in Paris, in 1862, of the correctness of his conclusions.

Marion Sims was established as a surgeon in Paris in 1862. It is safe to say that he was keenly interested in Pasteur's achievements, and no doubt he was on the side of Pasteur in his controversy with the eloquent Ponchet. Sims was one of the first great surgeons of the time to accept Pasteur's germ theory of disease.

Pasteur's critics pursued him, and he worked for a time under great difficulties. Two of his daughters died, and in 1868, when he was 46 years of age, he had a cerebral hemorrhage. He was partially paralyzed on his left side for the rest of his life. When he was discouraged almost to the point of giving up his researches, the French Government provided him with a laboratory and the munificent annuity of five hundred dollars with which to continue his work. Pasteur isolated the micro-organisms of chicken cholera and made cultures of them in a medium of meat broth. By adding a few drops of the culture to bread and giving it to healthy fowls, he produced the disease in them in a virulent form. He observed that in using cultures which had not been renewed for several weeks, when given to chickens, they had a mild form of cholera from which they recovered. He later tried to produce cholera in those chickens, and could not. He then used the attenuated cultures to produce immunity to cholera in chickens. Thus was born the principle of vaccination with attenuated bacteria and viruses to prevent contagious and infectious diseases.

Anthrax in sheep was an important economic problem in France, which Pasteur solved by producing immunity to the disease in cattle with the use of attenuated cultures of the anthrax bacillus. While Pasteur was making experiments on anthrax, a few sheep died. The antivivisectionists of France arrayed against Pasteur, and

for a time many sheep raisers regarded him as they did a "sheep-killing dog." One of Pasteur's great triumphs in confounding his critics was to invite them to witness proof that his anthrax vaccines would prevent the disease in sheep. In their presence he gave 25 sheep the vaccines, and, a few weeks later, he inoculated them and 25 other sheep with cultures of the anthrax bacillus. They were invited back later to find the 25 vaccinated sheep grazing contentedly, while the 25 unvaccinated sheep were all dead. Howard W. Haggard, in *"Devils, Drugs and Doctors,"* cites Huxley, the English biologist, as estimating that the economic saving to France by Pasteur in his discoveries of methods for preventing diseases of wine, silk-worms and sheep "would suffice to cover the indemnity of five billion francs paid by France to Germany in 1870."

Hydrophobia, the most fatal of all diseases, at one time threatened to destroy all the dogs in France; and hydrophobia was not infrequent among the human victims of mad dogs. Pasteur, in attacking that problem, was unable to isolate the micro-organism that caused hydrophobia—it has not yet been found—but he made a culture of it and called it a virus. He found that the virus of rabies was fixed in the nervous system of dogs. He reproduced the disease in rabbits, and by using attenuated cultures made from the nerve tissue of rabbits, produced immunity to rabies in dogs and hydrophobia in humans. Since the incubation period of rabies is longer than the time that it takes to produce immunity, Pasteur's rabies vaccine, if used early enough, will prevent the disease in animals and in humans who have been bitten by mad dogs.

While rabies is found occasionally in cats and among wild animals, if it were possible to vaccinate the canine population of a country against the disease, as is practiced on humans in the United States in the prevention of typhoid fever, there would be no more mad dogs, and hydrophobia would cease to exist.

It is strange that the French failed to recognize the import of Pasteur's discoveries until after Joseph Lister of Glasgow, in 1866, had applied his principles in developing antiseptics in preventing the infections of wounds; and until the Germans, after 1880, working on his germ theory of disease—

though giving Pasteur scant credit for the greatest of all achievements in medicine—had evolved the science of bacteriology. It was not until 1886 that the Pasteur Institute was established to put into practice Pasteur's method of vaccination against hydrophobia. It later was enlarged and endowed, until it became recognized as one of the greatest research institutions in the world. The French Government also awarded him the Grand Cross of the Legion of Honor,

and provided him a comfortable annuity to care for him in his declining years. The French, though belated in recognizing the greatness of Pasteur, revered him in the latter years of his life for what he had done for France. However, the thought comes that if the French had loved Napoleon, and his imperialism, less, and had appreciated Pasteur, and his ideals, more, their place in the world would be different from what it is today.

ALABAMA DOCTOR

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ALABAMA MEDICAL ASSOCIATION LITIGATION

Medical Societies in Alabama and the State Medical Association have not been without their differences and battles, both private and public. If surviving warm disputes and court contests is the measure of vitality of these organizations, then there can be no doubt about their strength. Quarrels in the lodge room and combat in court have not weakened nor divided the doctors.

In 1883, the Medical and Surgical Society of Montgomery struck the name of Dr. J. S. Weatherly from its rolls and placed Dr. John H. Blue in his place, as censor. Dr. Weatherly went to law about it and the Supreme Court ordered the Society to reinstate him.⁵⁹ The Society yielded to the Court's order, restored Dr. Weatherly to membership, and then promptly ousted him again by the close vote of eight to seven. The Doctor went back to Court and again won his case in the Supreme Court for reinstatement.⁶⁰ Chief Justice Stone held that the Society had the right to make its own constitution and by-laws and, having done so, it had to observe them, however inconvenient or embarrassing they might prove to be in administration.

A substantial legal attack was made upon the combination of the State Medical Association and State Board of Health when Dr.

T. D. Parke, et al., brought suit against Dr. Samuel W. Welch, State Health Officer, R. L. Bradley as State Treasurer, and the Medical Association of the State of Alabama⁶¹ to enjoin payment of State appropriations for the use of the Board of Health. There must have been a strong difference of opinion for the case was hard fought by both sides.⁶²

The Supreme Court held with the Association and against Dr. Parke and his co-complainants. Said the Court: "The State has availed itself of a ready-made organization of professional and practical medical scientists and . . . converted it bodily into a State Board of Health." The Court further held that "the Medical Association of the State of Alabama, while a private corporation, nevertheless in its relation to the State Board of Health and to the public welfare in general, is a *quasi public corporation*, charged with duties and responsibilities which it cannot evade," and that the State Board of Health could receive and expend the State appropriation.

61. 204 Ala. 455 (86 So. 28). The other complainants were Dr. Cunningham Wilson and Dr. E. P. Riggs. All three were Birmingham doctors. They thought Jefferson County, with its large number of doctors, did not have fair representation in the Association's affairs, and wanted to change the Constitution to make it more democratic. (Transactions, M. A. S. A., 1914, pp. 501-583 and 588.)

62. See paper by Dr. E. P. Riggs, and another by Dr. W. H. Sanders and the discussions which followed, appearing in full in the 1914 Transactions of the State Medical Association, pp. 501 and 510. The paper by Dr. Sanders contains a full exposition of the Alabama System.

Continued from the October Journal and concluded in this number.

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59. *The Medical and Surgical Society of Montgomery County v. Weatherly*, 75 Ala. 248.

60. *Weatherly v. Medical and Surgical Society of Montgomery County*, 76 Ala. 567.

One Leonora Bond sought by mandamus to force the State Board of Medical Examiners to let her register and take examinations for a certificate to treat the diseases of human beings. The Supreme Court upheld the rules of the Board, and approved the manner in which they were administered and enforced. Leonora lost.⁶³

The most recent contest between members and a local Society comes from Mobile County, when Dr. Howard S. J. Walker sought an injunction against the Medical Society of Mobile County to restrain it from enrolling as members Dr. Virginia E. Webb and Dr. John Greene,⁶⁴ as instructed so to do by the State Medical Association. In its final decision the Supreme Court held that the Association acted within the scope of its supervisory jurisdiction over the County Medical Society in ordering enrollment as members of two eligible physicians who were excluded pursuant to agreement among certain members to deny membership to all applicants regardless of qualification pending the duration of the war.

PRACTICING MEDICINE WITHOUT A LICENSE

Under the earlier statutes, if a person without being licensed practiced medicine, the penalty imposed by law was that he could not enforce payment for his services. Later, practicing medicine without a license—or certificate of qualification—was made a misdemeanor and subjected the offender to criminal prosecution.⁶⁵

While there were, no doubt, frequent violations of the law, it was not until 1889 that a case reached the Supreme Court where the defendant was a doctor being prosecuted for unlawfully practicing medicine.⁶⁶ The defendant won on a technicality in the high court, but violators of the law at once became more circumspect. The Medical Association procured an amendment⁶⁷ to the Medical Practice Act which tightened

the slack places, but one Nelson escaped conviction by proving that he did not hold himself out as a physician and did not pretend to be one, but simply advised and gave medicine to the sick person as a neighbor or friend, and that he made no charge and expected no compensation for what he did.⁶⁸ The State's case was weak on proof of the facts, and the Court held Nelson had not violated the law under the evidence before them.

Then came the case of E. Eugene Bragg, who practiced "osteopathy." He did not have a certificate of qualification from the State Board of Medical Examiners and contended that he did not need to have one as he was *not practicing medicine* within the meaning and language of the statute. The Supreme Court, speaking through Judge Tyson who wrote an extensive and learned opinion, held that the language "practice of medicine" and "medicine" in the broad comprehensive sense meant "the science or art of healing and curing disease," and that if Mr. Bragg wanted to practice osteopathy he would have to get a certificate of qualification.⁶⁹ The decision and opinion were received as a great victory by the medical men.

It was not so long after the Bragg case that the Court again gave powerful support to the Medical Association by holding that it had full power and authority to prescribe the rules and regulations governing the issuance of certificates to medical practitioners.⁷⁰

These rulings of Alabama's highest court seem to have discouraged unlicensed parties from trying to intrude into the profession of

68. *Nelson v. The State*, 97 Ala. 79.

69. *Bragg v. The State*, 134 Ala. 165. This opinion caused the Legislature to change the law from reading "any person who practices medicine or surgery," to read "any person who treats or offers to treat disease." (See *Wideman v. State*, 213 Ala. @ 172.) In the Legislative Session of 1903, the osteopaths, led by the good looking and captivating Mrs. Ligon, an osteopath herself and also the wife of an osteopath, came very close to overturning the medical practice laws of the State by advocating a law for a separate board of examiners of osteopaths. The bill passed the House, and the best the doctors could do in the Senate was a tie, 17 to 17. The Lieutenant Governor, who presided over the Senate, was Dr. R. M. Cunningham, who, upon the tie, was entitled to vote. He voted with the doctors and killed the bill. It was a close call.

70. *Brooks v. The State*, 146 Ala. 153.

63. *State ex rel Bond v. State Board of Medical Examiners*, 209 Ala. 9, 95 So. 295. The case is an authority holding Code 1923, Sect. 2838, does not limit Examiners from prescribing qualifications other than moral.

64. *Howard S. J. Walker v. The Medical Society of Mobile County, et al.*, 22 So. (2d) 715.

65. Acts 1876-77, p. 81.

66. *Brooks v. State*, 88 Ala. 122. It had been held in *Harrison v. Jones*, 80 Ala. 412, that if the doctor were guilty of a misdemeanor in practicing he could not collect his bill.

67. Acts 1890-91, p. 857.

healing and curing diseases. But in 1913, J. J. Smith's case came to the Court.⁷¹ Smith's defense was that he was a "mental healer," and that a law prohibiting or confining the right to exercise God-given skill or science in healing disease was unconstitutional and not to be obeyed. In spite of citations from Matthew, Acts, and 1st Corinthians, which Smith claimed supported his contentions, the Court ruled against him and required him to get a certificate if he would cure or offer to cure people of disease.

There have been more cases against persons practicing "chiropractics" than all others combined. The approved presentation procedure is an action in the nature of quo warranto for intruding into the practice of treating and offering to treat diseases of people. In this sort of proceeding, the State merely proves the acts done by the defendant which he is prohibited by statute from doing unless he has a certificate of qualification to do them, and then the burden shifts to the defendant to prove his legal right to do the things he has been shown to have done.⁷²

The "movement cure," or mechanotherapy, has been held to require a license. The Court said the statute included "any sort of treatment for human beings for disease."⁷³ But it must be shown that the defendant treated or offered to treat a disease.⁷⁴

An unusual case developed from a prosecution by the City of Birmingham of one Fealy. The Court held if a person practices medicine without a license he is none the less guilty because in so doing he also practiced his religion. In those cases where no charge is made for the services and recourse is had merely to prayer without the employment of human agencies, it cannot be said that the person invoking divine interpretation in behalf of another is treating or offering to treat diseases of humanity so as to violate the statute.⁷⁵

Recently, the chiroprodists have been recognized by the Legislature as a separate group treating ills or diseases of human beings.⁷⁶ The State Board of Medical Examiners was given the power to examine applicants and grant certificates to practice chiroprody. In a case decided in 1943 the law was upheld.⁷⁷

LITIGATION ABOUT COMPENSATION FOR PROFESSIONAL SERVICES

In order to be successful in the general practice of medicine the doctor must be part scientist, business man, teacher, priest and politician. The wide range of associations participated in by the doctor bring about situations some of which inevitably lead to court.

The first cases which brought doctors to court were suits which they filed trying to collect for their services.⁷⁸ In those early days, if a doctor was not legally entitled to practice, he could not force collection of his bill in court. This was the only penalty the law imposed for practicing medicine without a license.

Of course there were many who did not pay the doctor, and occasionally he would sue in an effort to collect what was due him. Then the debtor, looking around for some way to escape a judgment against him, would require the doctor to prove his right to practice, in a desperate hope that he would not have his proof handy in court or that he would be too busy to ride from the county court house to his home, often miles away, and fetch his license or diploma.⁷⁹ If the diploma was lost, secondary proof could be introduced to prove the doctor had one, but this was a tedious proceeding.⁸⁰ After the passage of the "1877 law," if a person engaged in the practice of treating the diseases of mankind without a legal certificate of qualification to practice, he was guilty of a misdemeanor, and, further, he could not enforce collection of the debt due him for his services.⁸¹

71. *Ex parte Smith*, 183 Ala. 116 (8 Ala. App. 352).

72. *Robinson v. State*, 212 Ala. 459, 102 So. 693. *Cummings v. State*, 214 Ala. 209, 106 So. 852. *Donovan v. State ex rel Biggs*, 215 Ala. 55. *State v. Robert Bruce Harris*, 215 Ala. 56. *Fruitiger v. State*, 215 Ala. 451.

73. *State v. Higbee*, 224 Ala. 121.

74. *Thompson v. State*, 228 Ala. 231.

75. *Fealy v. Birmingham*, 15 Ala. App. 367, 73 So. 296.

76. Acts 1939, p. 600—Welch Code, Title 46, Sect. 259.

77. *State v. Friedkin*, 244 Ala. 494.

78. The first case in the Alabama Supreme Court was *John Meeker v. James Childress*. Meeker practiced in St. Stephens. (1 Minor, p. 109) Decided June, 1823.

79. *Matthews v. Turner*, 2 S and P., 239.

Hill v. Boddie, 2 S. and P., 56.

80. *Halliday v. Butt*, XL Ala. 178.

81. *Harrison v. Jones*, 80 Ala. 412.

Doctors could, and sometimes did, make agreements of "no cure, no pay." Such a contract was good in the courts.⁸² The Alabama Court also held a third person liable for the doctor's charges when such person made an original promise of his own to pay for the services or authorized the employment himself.⁸³

A physician employed to care for an injured employee has no implied authority to employ others to assist him at the expense of the employer. If the employer does not request or authorize the employment, he is not liable for the services of the second physician. The original physician engaged by the employer is an independent contractor.⁸⁴ It is submitted that the first physician is indebted to the doctor he called in and should pay him.

Sometimes the doctor's bill has been regarded as too high and, payment being refused, the doctor had to accept what was offered or sue.⁸⁵ And in at least one case the defense of lack of skill on the part of the physician was offered in resisting his action to collect his bill for services.⁸⁶ In another

case the defense was that the services were of no value.⁸⁷

The doctor is legally required to testify in court for the fee of the ordinary witness. Thus, in a case where one Kit Barnard was being tried for murder in Madison County, Dr. J. J. Dement, who attended the deceased and had seen the wound, was a witness. He was asked to state the nature and character of the wound received and its probable effect. This the doctor declined to do, stating that he had not been remunerated for his professional opinion nor had compensation for his professional opinion been promised or secured. The judge informed him that it was his duty to answer. The doctor continued to refuse and the Judge fined him for contempt. The Supreme Court upheld the action of the Trial Judge.⁸⁸

In discussing why the law would not excuse one from giving evidence, except in certain cases, as for instance the Sovereign, Judge Manning quoted from an English authority:

"Were the Prince of Wales, the Archbishop of Canterbury and the Lord High Chancellor to be passing in the same coach, while a chimney sweeper and a barrow-woman were in a dispute about a half-penny worth of apples and the chimney sweeper and the barrow-woman were to think proper to call upon them for their evidence, could they refuse it? No! Most certainly not!"

If one doctor sells his practice, and his horse and buggy, to another doctor, and also agrees, as a part of the sale, to not practice any more in that town for two years or forfeit \$200.00, the purchasing doctor can enforce the agreement not to practice.⁸⁹

The extent of the services due by the physician where he was under contract as a company doctor has been considered by our Court.⁹⁰

THE DOCTOR IS SUED FOR DAMAGES

Actions for malpractice against physicians were rarities in Alabama prior to 1910. Since that date they have been more or less common especially in the larger cities. The basis of such action is that the doctor failed to do his legal duty. What is this legal duty which the doctor owes his patient?

82. *Mack v. Kelly*, 3 Ala. 387.

Jonas v. King, 81 Ala. 285.

Wellman v. Jones, 124 Ala. 580, 27 So. 416.

Here there was a special contract to cure the morphine habit.

83. *White v. Mastin*, XXXVIII Ala. 147.

Curry v. Shelby, 90 Ala. 277, 7 So. 922.

Weil v. Centerfit, 201 Ala. 531, 78 So. 885—

See also

Hogan v. Colley, 227 Ala. 505, 150 So. 501.

Gay v. Taylor, 208 Ala. 376, 94 So. 473.

Cardon v. Taylor, 109 So. 176.

84. *Johnson v. Roberts*, 212 Ala. 535, 103 So. 563.

85. *Morriset as Ex. v. Wood*, 123 Ala. 384.

In discussing the question of defendant's testimony for the doctor's bill, Judge McClellan said: "The amount or value of the latter's (patient's) estate could shed no legitimate light upon this issue." . . . "The cure or amelioration of disease is as important to a poor man as it is to a rich one, and, prima facie, at least the services rendered the one are of the same value as the same services rendered to the other. If there was a recognized usage obtaining in the premises here involved to graduate professional charges with reference to the financial condition of the person for whom they were rendered, which had been so long established and so universally acted upon as to have ripened into a custom of such character that it might be considered that these services were rendered and accepted in contemplation of it, there is no hint of it in the evidence."

86. *McDonald as Ex. v. Harris*, 131 Ala. 359.

87. *Jonas v. King*, 81 Ala. 285.

88. *Ex Parte Dement*, LIII Ala. 389.

89. *McCurry v. Gibson*, 108 Ala. 451.

90. *Woodward Iron Co. v. Dabney*, 205 Ala. 615, 88 So. 873.

The rule was first declared in a case which was not an action for damages. The defendant in that case, in endeavoring to escape paying a bill for services, claimed the doctor did not perform his duty—did not use the skill he should have used. This required the Court to announce the rule for the doctor-patient relation. It is simple and plain and has survived without substantial change since first declared. The Court said:

"The reasonable and ordinary care, skill and diligence which the law requires of physicians and surgeons is such as physicians and surgeons in the same general neighborhood, in the same general line of practice, ordinarily have and exercised in like cases."⁹¹

The burden of proving that the doctor did not do his legal duty is on the plaintiff. The Alabama law is that there is no presumption of negligence or want of skill arising from a failure to cure.⁹² Nor does the doctrine of *res ipsa loquitur* aid the plaintiff. He must prove negligence in diagnosis or treatment, and it is not enough to show that an unfortunate result followed the diagnosis or treatment.⁹³

It was also declared as early as 1910 that "there is no rule of responsibility which requires of physicians to be infallible in the diagnosis or treatment of disease."⁹⁴ Nor does the physician, unless he be unwise enough to make an express contract to that end, insure or warrant a successful operation or cure.⁹⁵ The doctor is not liable for an honest mistake or error of judgment in making a diagnosis or prescribing a mode of treatment where the proper course is subject to reasonable doubt.⁹⁶

91. *McDonald Ex. v. Harris*, 1313 Ala. 359 @ 368 (1901).

See also *Moore v. Smith*, 215 Ala. 592, 11 So. 918.

Carraway v. Graham, 218 Ala. 453, 118 So. 807.

Ingram v. Harris, 244 Ala. 246, 13 So. (2d) 48.

In *Snow v. Allen*, Judge Knight added to the rule, after the words "in like cases," the words "under like conditions." 227 Ala. @ 620.

92. *Shelton v. Hacelip*, 167 Ala. 217 (1910), 51 So. 937.

93. *Moore v. Smith*, 215 Ala. 592, 111 So. 918.

Ingram v. Harris, 244 Ala. 246, 13 So. (2d) 48.

94. *Hamrick v. Shipp*, 169 Ala. 171 @ 175.

95. *Snow v. Allen*, 227 Ala. 615, 151 So. 468.

96. *Barfield v. South Highlands Infirmary*, et al, 191 Ala. 553, 68 So. 80.

Ingram v. Harris, *supra*; *Moore v. Smith*, *supra*.

A plaintiff may maintain his action against the physician or surgeon for malpractice either in tort or contract.⁹⁷ This right can be extremely important in some instances, for example where the statute of limitations is plead as a defense. The tort action is barred in one year, but six years are required to bar the action if brought *ex contractu*.⁹⁸ Ignorance of the cause of action unless superinduced by fraud will not stop the running of the statute. Difficulty of ascertainment of it will not toll the statute. And the facts of fraud, if plead as an answer to the statute, must be averred so that it can be clearly seen that fraud did intervene to prevent a discovery of the wrongful act upon which the action is based.⁹⁹

The problem of who is liable where several doctors have connection with the case has several times been touched on by our Court. No inclusive rule can be laid down which will cover all cases. The facts of each case will ultimately determine who, if any-one, is liable.

Where a doctor advised plaintiff to have an operation and, after consulting with plaintiff, employed a surgeon to perform the operation, to be paid by the plaintiff, the doctor (defendant) was not responsible for any default on the part of the operating surgeon who was practicing his profession as an "independent agent."¹⁰⁰ The Court described the doctor as an "independent contractor," where he was engaged by employer to care for an employee, and that the doctor had no express or implied authority to employ another physician to assist him, at the expense of his employer.¹⁰¹

The hospital corporation was held not liable for acts of the doctor who performed the medical and surgical services for the plaintiff where plaintiff employed the doctor independently even though the doctor was a shareholder in and an officer of the hospital corporation.¹⁰² But if the plaintiff's cause of action arises out of acts of both the doctor and the hospital they can be sued jointly. In one case the relation-

97. *Carpenter v. Walker*, 170 Ala. 659.

98. *Sellers v. Noah*, 209 Ala. 103, 95 So. 167.

99. *Hudson v. Moore*, 239 Ala. 130, 194 So. 147.

100. *Robinson v. Crotwell*, 175 Ala. 194 @ 209.

101. *Johnson v. Roberts*, 212 Ala. 535, 103 So. 563.

102. *Barfield v. South Highlands Infirmary*, 191 Ala. 717.

ship was such that the Court referred to the doctor as the "alter ego" of the hospital.¹⁰³

The patient is entitled to have the benefit from and skill of the physician he has selected, formed from his own diagnosis. Accordingly the physician employed may not rely upon the diagnosis of another, no matter how skilled, in administering drugs in the treatment of disease which contain a deadly poison.¹⁰⁴

There have been several singular cases arising out of the "doctor-patient" relation. The patient won a verdict on the theory of the physician neglecting him, rather than upon any lack of skill upon the part of the doctor, and the Supreme Court allowed it to stand.¹⁰⁵ Another plaintiff attempted to collect damages from his doctor because the doctor failed to treat him at his office on a Sunday morning, and also refused to treat plaintiff at a certain hospital. The Court held that the doctor had a right to refuse to treat plaintiff at a certain place and patient could not compel him to do so, in the absence of proof that the physician's reason for so doing was purely whimsical or capricious.¹⁰⁶

In a North Alabama case the patient charged the physician with negligence and the physician replied that the patient was guilty of contributory negligence because he refused to submit to an anesthetic so that the doctor could better examine his injury.¹⁰⁷

The rules governing the duty and liability of physicians and surgeons in the performance of professional services are applicable to practitioners of dentistry.¹⁰⁸ But the same rules do not seem to be yet applied to optometrists.¹⁰⁹

103. *Woodlawn Infirmary, Inc. v. Byers*, 216 Ala. 210, 112 So. 831.

Stephens v. Williams, 226 Ala. 534, 147 So. 608.

104. *Thaggard v. Vages*, 218 Ala. 609, 119 So. 647.

105. *Torrance v. Wells*, 219 Ala. 384, 122 So. 322.

106. *Dabney v. Briggs*, 219 Ala. 127, 121 So. 394.

107. *Hester v. Ford*, 221 Ala. 592, 130 So. 203.

108. *McTyeire v. McGaughey*, 222 Ala. 100, 130 So. 784.

109. *Hampton v. Brackin's Jewelry & Optical Co.*, 237 Ala. 212, 186 So. 173.

Gilbert v. Louis Pizitz Dry Goods Co., 237 Ala. 249, 186 So. 179.

These cases hold that where the optometrist was employed by a company it was liable for any injury to a patient proximately caused to patient

When damage cases are submitted to juries for decision the arguments of counsel invariably are adjusted to the particular case. No wise lawyer would indict the whole profession. As a rule the average juror may be skeptical about doctors he does not know, but his own doctor is above reproach and he will not stand for any attack on him even as a member of a class. When the defendant doctor fails to produce other doctors or nurses to testify in his behalf, the argument is made that "he can't get anyone who will support him because what he did was wrong and inexcusable." If the unfortunate defendant produces several doctors to testify that his conduct was proper, as he did in a certain case, the argument can be and was made that there is "a closed corporation" between doctors and nurses. And again, "that doctors are the most closely bound together organization that I have ever seen—closer than any fraternal organization." Of course the purport of this argument is that the testimony of the doctors not be accorded weight because they were merely helping a professional brother. The Supreme Court disapproved of such argument.¹¹⁰

An examination of the cases in our reports will disclose that the Alabama judges have been extremely careful to see that the physician and his societies get fair treatment in the administration of the laws of the State which affect or involve their profession. This has been true from the very beginning. The Court has always recognized the need of legal authority to regulate the practice of medicine and that this authority be administered by those educated and trained in that field. Not only has the Court seen this need as a sort of public or judicial policy but it has consistently supported and protected it.

The individual cases brought to the Court have frequently been difficult but the Court has never faltered nor evaded its duty. Where verdicts recovered against medical men have been justified and fair in amount, they have permitted them to stand. Where

by negligence of the optometrist notwithstanding the independent character of the optometrist's business. The doctrine of respondeat superior applies, whether the optometrist is an independent contractor or an ordinary agent since the duty on the defendant is held to be nondelegable.

110. *Moore v. Holyrod*, 219 Ala. 392, 122 So. 349.

the doctor has been the victim of bias and prejudice the Court has given him relief.¹¹¹

The Court has approved this language:

"But if every verdict mulcting a reputable physician in damages must be sustained if any of his professional brethren can be induced to swear that, assuming the testimony of the family and friends to be true, the physician had made a mistake of judgment or been guilty of unscientific practice, then the profession would be one in which unmerciful disaster follows fast and follows faster."

The Alabama Court then added its own words:

"The Courts everywhere have thought it necessary to exercise great care in order to protect honest and capable medical men from being mulcted by the verdict of jurors who know little or nothing of the subject they are required to consider and determine in our system of jurisprudence, at the same time administering the rule of liability declared by this Court in cases heretofore decided."¹¹²

Our Court has declared that: "There never has been but one 'Perfect Healer'";¹¹³ they commended "the principle and practice of an honorable profession,"¹¹⁴ and have long revealed that they consider the medical profession should be accorded the high station which it demands of itself in the oath of Hippocrates, "equally free from the mysticism of a priesthood and the vulgar pretensions of a mercenary craft."¹¹⁵

NOTE

Acts 1834, p. 13. Approved January 10, 1835:

Demopolis in Marengo.

Nominated, James Davenport, B. Gayle, E. Adams, John Dozier, John R. Larkins, Wm. C. Gillespie, and Henry F. Harrington.

Elected, James Davenport, B. Gayle, John Dozier, John R. Larkins and Wm. C. Gillespie. (Senate Journal, 1834, p. 188.

Montgomery.

Silas Ames, Charles S. Lucas, Thomas J. Vickers, J. J. Blythwood and John D. Read. (Senate Journal, 1834, p. 189.)

Acts 1836, p. 67. Approved December 21, 1836:

Town of Livingston.

Five members elected by G/A. McCants, Smith, Dalton, Coleman and Posey. (Senate Journal, 1836, p. 11.)

111. *Robinson v. Crotwell*, 175 Ala. 197, 57 So. 23.

Moore v. Smith, 215 Ala. 595, 111 So. 918.
Carraway v. Graham, 218 Ala. 453, 118 So. 807.

112. *Carraway v. Graham*, 218 Ala. 453 @ 460.

113. *Snow v. Allen*, 227 Ala. 615 @ 620.

114. *Robinson v. Crotwell*, 175 Ala. 197 @ 208.

115. From the Hippocratic oath.

Acts 1837, p. 43. Approved December 23, 1837:

Town of Irwinton, Barbour County.
Five members elected by G/A.

Acts 1838, p. 52. Approved January 30, 1839:

Medical Society of South Alabama constituted the Medical Board at Selma.

Acts 1841, Called Session, p. 14. Approved April 23, 1841:

Alabama Medical Society given powers of Medical Board.

Acts 1841, p. 74. Approved December 21, 1841:

Medical Society of Mobile—to designate five members to serve as Medical Board of Mobile County. Incorporators, Solomon Mordecai, John H. Woodcock, Henry S. Levert, and Josiah C. Nott.

Acts 1841, p. 29. Approved December 23, 1841:

Board of Physicians established at Florence.

Acts 1841, p. 142. Approved December 27, 1841.

Medical Board of Physicians for the Town of Jacksonville in County of Benton (now Calhoun).

William Williamson, Atkinson Pelham, James G. Francis, G. R. Grant, J. C. Clarke.* (This is the first Board named in the Act.)

Acts 1843, p. 77. Approved January 16, 1844.

Medical Board at Eufaula in Barbour County. Five members to be elected by the resident physicians of the county who are graduates of medical colleges in the United States and who have produced their diplomas as evidence of same; election to be held in Clayton, thirty days' notice of time and place of election to be posted in Eufaula, Glennville, Spring Hill, Midway, Clayton, Louisville and Fullersville.

Acts 1843, p. 103. Approved January 16, 1844.

Medical Board of Physicians of Chambers County. The Act names the members of the Board Cuthbert G. Hudson, David S. Thomas, Charles C. Bilbro, Peterson T. Richardson and McCants.

Acts 1844, p. 23. Approved January 11, 1845.

Medical Board at town of Suggsville in Clarke County.

A. B. C. Dossey and W. H. Rogers of the County of Monroe; T. J. Krause and T. W. Belt of the County of Baldwin; George Leister and Dr. J. G. Hawkins of the County of Washington; Andrew Denny, William L. Tunstall, A. H. Hutchinson, Robert N. Murphy, M. A. McLeod, John B. Jones, S. Gayle and T. B. Rivers of the County of Clarke constituted Board of Physicians for the counties of Monroe, Baldwin, Washington and Clarke, to be styled the Medical Board of Physicians for the District composed of the counties of Monroe, Baldwin, Washington, Clarke—vacancies to be filled by members and to serve as Medical Board, etc.

Acts 1844, p. 85. Approved January 27, 1845:

Medical Board of Physicians for the Town of Talladega.

Henry McKenzie, Edward Adolphus Pearson, James C. Knox, Benton W. Groce and Abner E. Fant.

Acts 1844, p. 132. Approved January 25, 1845:

Medical College at Wetumpka.

James M. Hill, John A. Reynolds, Warren S. Williams, Offe L. Shivers, W. P. Hatchett, B. F. Borom, John McTyon, James Hogg, Thomas Edwards, Oliver Fleming and R. T. Brumley, Trustees of "The Alabama Medical University."

Acts 1846, p. 71. Approved January 13, 1846:

Medical Board in the Town of Crawford in the County of Russell.

Board of Physicians named. Erastus W. Jones, James W. Hunter, Thomas P. Park, Jeremiah C. Butler, M. D. Grant, P. Phillips, Jacob Lewis, O. B. Walton, Dr. Floyd of Salem, Dr. McCoy of Warcooche, Dr. Rogers of Girard, William Bacon, Dr. E. Bacon, Dr. Mall.

Acts 1847, p. 407. Approved March 3, 1848. Acts 1847, p. 393-4. (Tyre) Botannical:

Levi Adams of Jefferson County, permitted to practice medicine without a license, but to confine practice to Jefferson, Walker and Blount Counties.

Acts 1849-50, p. 314. Approved February 1, 1850:

Sydenham Medical Society of Montgomery.

William M. Boling, B. Rush Jones, Henry M. Jackson, William O. Baldwin, Mathew Bozeman and J. Marion Sims. "Object seems to have been to organize board of health of the city and the precautionary measures necessary to procure the same."

Acts 1851-52, p. 259. Approved February 16, 1852:

Homeopathic Medical Society of Montgomery. Drs. G. A. Ulrich, John H. Henry, Gustav Albright, P. M. McIntyre, George Singer, Julian Sampson, Argle, Hunley.

Acts 1851-52, p. 261. Approved February 7, 1852:

The Macon County Medical Board.

Drs. Erastus W. Jones, John G. Johnston, Henry A. Howard, Wesley F. Hodnett, William J. Mitchell, John W. Jones, John G. Whale, Jesse M. Vason, William S. Mabson, Noah B. Cloud, Boling A. Blakey, Edwin Fowler, E. B. Johnston, J. J. Mason, Samuel C. Cowen, James M. Foster, A. Lane, Henry M. Hunter and Lewis Sessions.

Acts 1853-54, p. 181. Approved February 15, 1854:

Cherokee County Medical Board.

Drs. John P. Rolls, John L. Harris, Blastengaim C. Sparks, John C. White, P. G. Cobb, R. R. G. Lee and George W. Lawrence.

Acts 1853-54, p. 58. Approved February 15, 1854:

Botanic Board created, but members not named.

Acts 1853-54, p. 243. Approved February 18, 1854:

Bellefonte Medical Board in Jackson County. John A. Morrison, David Sterne, William Mason, Albert G. Clopton, John B. Cook, F. B. Harris and Augustus Silly.

Acts 1853-54, p. 465. Approved February 7, 1854:

Russell County Medical Board.

Drs. M. H. Ford, D. M. Floyd, Solon M. Grigg, Sterling G. Bass and Charles H. Lockhart.

Acts 1853-54, p. 478. Approved February 2, 1854:

Medical Board of Physicians for the County of Choctaw.

J. A. Russell, J. T. Foster, S. Walton, A. S. Hannon and A. J. Curtis.

Acts 1855-56, p. 208. Approved February 1, 1856:

The Medical Board of Physicians for the town of Newton in the County of Dale.

William B. Dostor, Joshua S. Sappington, James J. Cox, William L. Milligan and Andrew J. Stephens.

Acts 1855-56, p. 210. Approved February 15, 1856:

Pickens County Medical Board.

Joel E. Pearson, Thomas S. Owen, S. F. Hill, R. O. Beale, Thomas Boone, John J. W. Payne, Joseph E. May and Thomas Wakefield.

Acts 1855-56, p. 253. Approved February 1, 1856:

Chambers County Medical Board.

Drs. J. W. Herrell, L. C. Ferrell, George F. Taylor, Thomas R. Russell, David A. Thomas, James M. Greene, W. E. Allen.

Acts 1855-56, p. 251. Approved February 14, 1856:

Medical Board of Physicians for County of Greene.

Drs. W. T. Webb, T. C. Osborne, John H. Parrish and T. M. Peterson.

Acts 1855-56, p. 255. Approved February 14, 1856:

Henry County Medical Board.

Drs. John P. Crawford, O. B. Bowen, James Galespie, John E. Price, F. B. Wakefield, Dr. Martin and Dr. Thomason.

Acts 1855-56, p. 83. Approved January 19, 1855:

Medical Board of Physicians of Shelby County.

David Andrews, James T. Reese, A. S. Woolley, J. C. Blake and James Meredith.

Acts 1855-56, p. 72. Approved February 11, 1856:

Board of Botanic Physicians for the State of Alabama.

Drs. William M. Moxley and Charles J. Pickett of Barbour County; G. W. Johns of Lawrenceville, Henry County, J. Wallis of Clopton, Dale County, Silas H. Cox of Pickens County, William Loveless and John Miller of Chambers County, Green W. Whitfield of Limestone County, O. L. Shivers of Perry County, Moses E. McCall of Conecuh County, Henry J. McKinnon of Russell County, John M. Bates and F. M. Peterson of Greene County, William Farish of Monroe County, Mitchell Poole of Jefferson County and Thomas T. Reese of Walker County.—Board empowered to grant licenses to practice Botanic medicine. Its purpose was to "better regulate the practice of medicine under the Botanic System in this State."

Acts 1857-58, p. 93. Approved February 2, 1858.

Medical Board of Autauga County.

Drs. Thomas A. Davis, Charles M. Howard, Duncan McNeill, Samuel P. Smith, Joseph H. Vincent and Joseph D. O. Bannon.

Acts 1857-58, p. 87. Approved February 6, 1858.

Pike County Medical Board.

Drs. J. P. W. Amerine, J. L. Nixon, Joseph B. Fannin, O. S. Johnson, J. B. Lucky and O. F. Knox.

Acts 1857-58, p. 146. Approved February 2, 1858.

Medical Board of Perry County.

John E. McEachin, Francis A. Bates, Robert D. England, John T. Barron and Samuel Perry.

Acts 1859-60, p. 450. Approved February 21, 1860:

Blount County Medical Board of Botanic Physicians.

George White, J. W. Musgrove of Blount County, Robert C. Freeman of Winston County, J. W. Lowery of Marshall County and C. C. McAnnally, P. M. Musgrove and Dr. Mattox of Walker County, constituted the Board of Botanic Physicians for County of Blount.

Acts 1859-60, p. 486. Approved February 21, 1860:

Franklin County Medical Board.

Drs. H. N. Houston, William Despry, William Newsom, A. W. Stevenson, James M. Houston, J. H. McGangley, Robert Abernathy and Frederick Anderson.

Acts 1859-60, p. 509. Approved January 25, 1860:

Coffee County Medical Board.

Drs. John G. Moore, J. P. Blue, F. A. Byars, John Steed and William Simmons.

Acts 1859-60, p. 390. Approved February 24, 1860:

Coosa County Medical Board.

T. W. Mason, M. G. Moore, J. C. Harris, A. D. Graham, B. T. Smith, J. A. Kelly, J. P. Goggins and J. L. Gilder.

Acts 1861, Called Session, p. 85. Approved January 29, 1861:

St. Clair County Medical Board.

Drs. W. H. Benson, A. W. Nixon, T. L. Hammond, Levi Lloyd, R. Freeman and Q. Acton.

Acts 1865-66, p. 263. Approved February 8, 1866:

The Medical and Surgical Society of Montgomery.

Incorporators, W. O. Baldwin, J. F. Johnson, T. R. Hill, R. P. Michel, Samuel E. Norton, A. A. Wilson, J. G. Scott, E. A. Sample, W. J. Holt and P. C. Lee.

To perform duties of Medical Board. (Protective measure against carpetbaggers.)

Acts 1865-66, p. 299. Approved February 13, 1866.

Medical Board of Physicians for the County of Washington and South Choctaw.

Drs. James S. Evans, E. D. Connor, A. H. Hutcherson, William M. Dunn of Choctaw County; and Drs. James G. Hawkins, Lewis Harris and Robert Coleman of Washington County. (Note: Board covers South half of county.)

Acts 1866-67, p. 240. Approved January 28, 1867.

Marshall County Medical Board.

Dr. James M. Jackson, William G. Smith, J. E. Nicholson, J. T. Harrison and J. C. McCorkle.

Acts 1866-67, p. 393. Approved February 12, 1867:

Jefferson County Medical Board.

Drs. Joseph R. Smith, Nathaniel Hawkins, J. B. Vann and G. J. Deason—to meet at Elyton.

Acts 1866-67, p. 501. Approved February 15, 1867:

Medical Board of Physicians for the County of Hale.

Drs. Thomas C. Osborne, John H. Parrish, Francis M. Pittman, Thomas R. Ward and E. Young.

Acts 1866-67, p. 560. Approved February 18, 1867.

Medical Board for Elmore County.

Drs. E. Mason, M. G. Moore, J. E. Harris, A. N. Lightfoot and W. C. Penick.

Acts 1866-67, p. 382. Approved February 8, 1867:

Wilson McLemore of Pike County authorized to collect fees for curing cancers, all laws of force to the contrary notwithstanding.

Acts 1868, p. 364. Approved December 1, 1868:

Medical Board of Physicians for Lee County.

Drs. James P. Fitzgerald, J. B. Barnett and S. R. Russell.

Acts 1869-70, p. 303. Approved March 3, 1870:

Medical Board of Lawrence County.

Drs. W. B. Irwin, B. O. Masterson and Crowe. Board directed to adopt Code of Ethics of American Medical Association and admit none to practice except graduates of reputable medical colleges.

Early Congenital Syphilis—It should be noted that treatment sufficient to secure disappearance of clinical signs of syphilis or even reversal of blood signs of syphilis or even reversal of blood serologic tests may still not be adequate to arrest invasion of the cerebrospinal system by the spirochete pallidum. Therefore, every infant or child should be thoroughly studied for evidence of neurosyphilis before treatment is discontinued. To determine activity of syphilitic process in the nervous system, it is necessary to perform a lumbar puncture and to examine the spinal fluid to determine cell count, protein, serologic reaction and mastic or gold curve. It is not advisable to attempt to evaluate syphilitic activity in the cerebrospinal system solely on the basis of serologic result obtained with spinal fluid because the serologic result may be positive yet the process be an inactive one. A complete examination and often repeated examinations of the spinal fluid are required before a diagnosis can be conclusive. A lumbar puncture is essential for each case and should be done several months following treatment and before dismissal of the patient. In this way, special treatment for cerebrospinal syphilis can be initiated immediately, thus avoiding late manifestations resulting from improper and inadequate treatment. Every syphilitic infant is a potential case of neurosyphilis. Lumbar puncture should not, as a rule, be made before the infant is six months of age because a positive serologic result may not be obtained earlier even though infection has taken place.—*Watson, J. M. A. Georgia, Oct. '45.*

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LEGISLATIVE PLANNING FOR HOSPITALS IN ALABAMA

Unquestionably, the most important health measure passed by the 1945 session of the Alabama Legislature was that providing for the construction and operation, at public expense, of community hospitals in towns and cities needing them. Although its primary purpose is to enable this State to receive its share of Federal funds expected to be made available for hospital construction in all parts of the country under the terms of the pending Hill-Neely Bill, it would mark an important milestone in the discharge of Alabama's responsibility to her sick and injured entirely independently of the Hill-Neely Bill. For it (1) clearly acknowledges that the State has a responsibility to its victims of illness and injury; (2) provides the machinery for the discharge of that responsibility through the tax-supported institutions of healing; and (3) provides specifically that both State and county funds shall be made available for this purpose.

The measure authorizes the State Board of Health to "acquire, construct, equip, maintain and operate" public hospitals, health centers and related facilities for the

treatment of any type of disease. The State Board of Health is also authorized and required to set up "a master hospital plan" by which the State would be divided into regions, districts or zones, such division to be subject to whatever future revisions and changes may be found necessary or advisable.

An advisory council is required to approve all policies and regulations necessary for carrying out the objectives of the Act. This group's membership will consist of three hospital administrators, or persons with broad experience in the administration of hospitals, to be appointed by the Alabama Hospital Association or by the Governor, in the event that the Alabama Hospital Association fails to exercise this privilege; one member to be appointed by the State Board of Censors of the Medical Association of the State of Alabama from among its own membership; four lay members "with broad civic interests representing varied segments of the population," to be appointed by the Governor; the State Health Officer; the State Director of Public Welfare; the Director of the State Planning Board; the Director of Finance, and the Attorney General.

The State Board of Health is designated in the measure as the official representative of the State of Alabama for the receipt, handling and disbursement of funds to be made available by the Federal and State governments, philanthropic agencies and other sources to be used in carrying out the objectives of the law. Authorization is also given for the establishment and maintenance of such additional bureaus or divisions as the State Board of Health may require for the carrying out the objects of the measure.

The Act authorizes "any one or more local governing bodies" in any of the regions to be designated by the State Board of Health to call and give publicity to a public meeting at which citizens may express themselves regarding a proposal to form a hospital association. In accordance with the opinion expressed at that meeting, the governing body or bodies will determine whether such an association shall be formed. If the decision is favorable, an appropriate resolution or ordinance will be passed and the local governing body will appoint one member to represent each precinct or ward

Contributed by B. F. Austin, M. D., State Health Officer.

included within the jurisdiction of that governing body as a director of the association. The directors thereby appointed will make formal application to the Secretary of State for a certificate of incorporation, supporting the application with certain documentary evidence called for in the Act. The directors are required to choose a chairman from their own number and each director will serve for five years. He may be reappointed by the local governing body responsible for his appointment or may be succeeded at the end of his term by another appointee of the governing body. He will serve without compensation.

The directors of a hospital association are required to meet annually, and the association must be governed by a constitution and by-laws which have been drawn up by the directors and approved by the State Board of Health. The active direction of the association's affairs is made a direct responsibility of an executive committee of not less than five or more than nine members, to be selected by the directors from among their own number. The executive committee must meet once a month and carry on the affairs of the association in accordance with its constitution and by-laws and with the laws of the State of Alabama. It is required to appoint a medical advisory committee of from three to five members of the medical staffs of the hospitals in the area to be served by the association, which medical advisory committee will be responsible to the executive committee "for the professional aspects of the hospital's operations subject to the rules and regulations adopted by the State Board of Health."

Thus organized, the hospital association will be empowered to apply to the State Board of Health for authority to enter into a cooperative contract with the Board for the purpose of constructing, maintaining and operating a hospital and to act as the representative and agent of the State Department of Health in the construction and operation of such an institution.

The measure authorizes the local governing bodies of each political subdivision participating in the hospital construction program to appropriate their proper proportions of the cost of constructing, maintaining, equipping and operating such hospital or hospitals as may be determined upon by agreement between the hospital associa-

tion's executive committee and the State Board of Health. It also provides that any sums thus appropriated shall be paid into the treasury of the association and shall be paid out under instructions of the association's executive committee.

Appropriations of \$15,000 a year for each of the fiscal years 1945-46 and 1946-47 are included in the bill. These sums are to be made available "for administration, engineering, architectural or other services and functions necessary for carrying out the provisions of this Act." The Act also provides that "for purposes of construction funds may be allotted by the State Building Commission."

The Hill-Neely Bill carries an appropriation of \$5,000,000 to be made available to the individual states to enable them to make a survey of their existing hospitals, in order to determine their needs under the proposed hospital construction program and to comply with the other requirements for participation in the program. There is an additional appropriation of \$100,000,000 for the fiscal year ending June 30, 1946, this sum to be available for distribution to state health departments for aid in the construction and maintenance of local hospitals to be built and operated under this program. Federal financial participation may not be less than 25 per cent nor more than 75 per cent of the total cost, a particular state's actual percentage being determined by its financial needs. Subsequent Federal appropriations are to be made available for future operation of the program.

Anyone taking the trouble to examine the hospital situation in Alabama and to acquaint himself with the extent to which the need for hospital care is being met cannot fail to be saddened by what he learns; for the grim fact is that, even before the war brought unprecedented demands for such care, the ratio of beds to population was much lower than it should have been.

The State Department of Health conducted a hospital survey about five years ago in an effort to obtain a true and accurate picture of the situation as a guide for the future. According to that survey, there were 66 general hospitals in the State, exclusive of specialized institutions, hospitals operated by the Federal government and small institutions which were regarded as hospitals but actually were little more than physi-

cians' clinics or emergency stations. In those 66 institutions there were 4,067 beds, giving an average of 1.38 beds per 1,000 population. The average for the United States as a whole was 2.7 beds per 1,000 population. Thus, according to that study, Alabama in 1940 had only about half as many hospital beds as it needed to be as well off in this respect as the whole nation.

There is no means of finding out what progress, if any, has been made in the past five years in correcting this admittedly serious situation, as no survey duplicating that one made in 1940 has since been made. However, several months ago the State Planning Board, in cooperation with the Planning Commission of the State Medical Association and the State Department of Health, obtained information on all the hospitals in the State, including those which were not counted in 1940 because they had not met the requirements for approval by the Alabama Hospital Association or the American Medical Association. But, including them all—the unapproved, as well as the approved—it was found that Alabama had 83 hospitals in 1945, exclusive of those operated by the Federal government, tuberculosis sanatoria and other institutions devoted to special diseases and conditions. Those 83 were found to have a total of 5,633 beds, giving the people of the State an average of 2.07 hospital beds per 1,000 population. Even on this basis, the Alabama average is less than half that of 4.5 beds per 1,000 population recommended by the American Hospital Association.

The writer wishes to emphasize that the financial assistance provided by the Federal government under the Hill-Neely Bill and by the State under the law passed by the 1945 Legislature involves the exercise of no control whatsoever by either the State or the Federal government over the hospitals and health centers to be constructed under the program which these measures propose to make possible. The many institutions of healing which are expected to arise in towns and cities all over Alabama as soon as materials and labor become available will be owned and operated by local governing bodies, which alone will be responsible for their efficient, economical management and for their being able to serve the hospital and health center needs of those communities to the fullest possible extent.

A NEW DRUG IN THE TREATMENT OF MIGRAINE

"This report is concerned with evaluation of the effect of a new drug, D.H.E.-45 (dihydroergotamine), in the treatment of 120 patients who had migraine. The study extended over a period of three and a half years ending January 1, 1945." Thus do Horton, Peters and Blumenthal¹ begin the preliminary report of their study.

The Rochester investigators go on to tell us that ergotamine tartrate has, thus far, "been the most useful drug for aborting acute attacks of migraine. However, its continued use will not prevent recurrence of attacks. Moreover, toxic effects have been reported following its prolonged use." With these statements most practitioners agree.

In their conclusion, the Mayo Clinic observers say that "our clinical experience with use of the new drug, D.H.E.-45, in the treatment of 120 patients who had migraine, indicates that it is a safe and efficient preparation to use in aborting acute attacks of headache."

"In attempting to evaluate any new drug for the treatment of migraine, it is important to adhere strictly to accepted criteria for diagnosis of this syndrome. Of the 120 patients, seventy-nine exhibited all features of typical migraine. Of these seventy-nine patients, 75 per cent derived good to excellent results from the use of D.H.E.-45. The remaining forty-one patients had atypical migraine and only 36 per cent obtained good to excellent results with D.H.E.-45."

"A comparative study of D.H.E.-45 and ergotamine tartrate indicated that D.H.E.-45 was just as effective as ergotamine tartrate in relief of acute attacks of headache. Neither D.H.E.-45 nor ergotamine tartrate will prevent the occurrence of future attacks. Toxic reactions were noted three times more frequently with ergotamine tartrate than with D.H.E.-45. As used clinically, changes in blood pressure were not observed following use of the new drug. It apparently exerts no effect on the uterus and in this respect contrasts with ergotamine tartrate."

1. Horton, Bayard T.; Peters, G. A., and Blumenthal, L. S.: A New Product in the Treatment of Migraine: A Preliminary Report, Proc. of the Staff Meetings of the Mayo Clinic, 20: 241 (July 11) 1945.

Few conditions are more trying to both physician and patient alike than migraine. And seldom have more drugs and therapeutic procedures been introduced with generally unfavorable results. But it is heartening to realize that efforts are still being made to better the lot of the migrainous, a

truly pathetic group. Though Horton, Peters and Blumenthal have been careful to stress the fact that theirs is a preliminary report, it is quite possible that their investigations will result in a distinct advance in the therapy of migraine.

COMMITTEE CONTRIBUTIONS

MENTAL HYGIENE

ALCOHOLISM—A DISEASE

Frank A. Kay, M. D., Chairman
Birmingham, Ala.

Alcoholism, as a disease, as a personality disorder, was recognized by the Legislature of Alabama at its last session when it created the Commission on Education with Respect to Alcoholism. This Commission is composed of the Superintendent of The Alabama State Hospitals, the Director of the Department of Public Welfare, the State Health Officer, the Professor of Psychiatry of the Medical School of the University of Alabama, the Director of the Division of Vocational Education in the Department of Education, and two citizens of Alabama, to serve for terms of four years. The members are, respectively, Dr. W. D. Partlow, Miss Loula Dunn, Dr. B. F. Austin, Dr. Frank A. Kay, Mr. R. E. Cammack, Mr. Earl Hotalen and Mr. E. G. Pascoe.

On October 9, 1945, the Commission met and formulated plans for its educational campaign. A permanent office is to be established in the University Medical Center, in Birmingham, and an effort will be made to teach the people of the State the fundamental facts concerning alcoholism. Well-informed medical and scientific opinion now recognizes alcoholism as disease, as a personality illness, and the alcoholic as a diseased person. It further knows that the alcoholic can be helped and is worth helping, and it considers alcoholism a public health problem and a public responsibility.

Psychiatry has taken cognizance of the effectiveness and sincerity of a lay organization known as Alcoholics Anonymous, or "AA" as it is popularly called. One of its members has, upon invitation, addressed the Section on Neurology and Psychiatry of the

Medical Society of the State of New York. Dr. Harry Tiebout wrote favorably upon Alcoholics Anonymous in the American Journal of Psychiatry in its January 1940 issue. Dr. Foster Kennedy has discussed the work of this organization in a friendly and supportive manner.

The members of the Alabama Commission on Education with Respect to Alcoholism were willing guests at the Southern Conference of Alcoholics Anonymous in Birmingham October 8, 1945.

It is hoped that the medical profession of the State will keep itself informed on this question of alcoholism and because of it be willing and able to support the work of the Commission.

Alcoholism, as a public health problem, needs to be brought out into the open as has been done with cancer, tuberculosis and the venereal diseases. Only in this manner can we as an enlightened and progressive people deal effectively with it.

As Chairman of your Committee on Mental Hygiene I bring these developments to your attention and solicit your support.

Your Governor and your Legislature are to be commended for initiating this progressive movement.

Somatic Neuroses—There are many theories as to the cause of stomach ulcer but I do not believe anyone can deny the psychogenic factors concerned in its beginning. It is well known that ulcer occurs in the individual who lives under mental stress and strain and who gets little physical exercise. Doctors and lawyers are notorious subjects. Under such stress the vegetative nervous system, which is somewhat under the control of the mind, begins to play tricks with the function of the stomach; gastric motility is increased, the acid cells are stimulated and there is increased secretion of hydrochloric acid. At this stage the situation may be reversible and sometimes can be brought about by so simple a change as a short vacation.—*Redwood, Virginia M. Monthly, Oct. '45.*

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

B. F. Austin, M. D.
State Health Officer

RESPIRATORY DISEASES

Someone has aptly said that the respiratory diseases, like death, never take a holiday. There is never a moment when a considerable number of Alabamians and Americans generally are not suffering from the unpleasantness of the so-called common cold, the pains and fevers of influenza and the pleurisy and pulmonary congestion of pneumonia. However, there are several months during the year when these forms of illness are relegated to positions of relative unimportance in the health and mortality picture of State and nation, and our people give them comparatively little concern except when they or those dear to them become victims. At other times of the year these diseases assume a commanding position in the nation's health thinking, and their victims increase to many times those stricken at the low tide of their killing and invalid-creating power.

The respiratory disease season is almost upon us. At any time now we may expect the morbidity reports to contain a rapidly increasing number of cases of these three illnesses. This increase may be expected to continue through the winter and will probably not pass its peak until the warm, more pleasant days of spring arrive. It is appropriate, therefore, to consider them at this time and to urge the people of Alabama to take these dangers seriously and do everything possible to protect themselves against them.

This warning is especially needed with regard to the common cold, for there is a decided tendency among the general public not to take it seriously because it causes practically no deaths. It is too bad that its real potentialities are not understood by more people.

The common cold is believed to be responsible for more illness and more absenteeism from work, school and other normal activities than any other form of illness. Obviously, therefore, it seriously interferes with

activities and happiness everywhere, not only by making people miserable with their coughing and sneezing but also by depriving them, when they are employers, of the services for several days at a time of their most valuable workers and, when they are working for others, of the wages they fail to earn by being away from their desks and work benches.

While medical men freely concede that the common cold does not figure directly in the mortality tables, they emphasize that word *directly*. It is important, because indirectly colds cause many deaths. Here again we have no reliable statistics, and estimates may be pretty far from the mark. But it is well known in medical circles that neglected colds often pave the way for any number of other diseases that are much more serious and even fatal. The list includes such forms of illness as tuberculosis, influenza, pneumonia, and infections of the throat, nose and ears. As the writer has frequently pointed out, it is not exposure to germs alone that determines whether a person contracts the diseases caused by those germs. There is also the matter of the person's resistance at the time of exposure. And no one needs to be told that whether a person has a cold or not has a lot to do with determining whether his resistance is high or low.

Colds are like many other forms of illness in that it is usually much easier to avoid them than it is to cure them after they have been contracted. Obviously, the best way to avoid catching one is to stay away from sources of infection, that is persons who have them. This warning is especially apropos with regard to avoiding victims of beginning colds, whose cold-giving potentialities are much greater than those of victims of colds of several days' standing. The important thing to remember is that the tiny infective agents known as viruses are present in the tiny droplets which are exhaled by a person who has a cold and these droplets are sprayed into the air whenever such a person coughs or sneezes, unless he is one of the few who have enough consideration for others to cover their mouths and

noses with their handkerchiefs or some other material when they feel a sudden impulse to cough or sneeze. These cold-producing viruses are usually transferred from the sick to the well when the latter are in close physical proximity to the former. It is well to remember, however, that those tiny droplets may be sprayed into the air for a considerable distance from the cold victim. It is a good idea, therefore, to keep as much distance as possible between yourself and him.

Those troublesome cold viruses may also be transferred by handling or using unwashed or improperly washed eating utensils, dishes, towels, handkerchiefs and other articles which have been used by persons with colds. This is particularly true of things which are placed in the mouth. All that can be scalded should be, especially during the respiratory disease season. This precaution against colds also serves as a safeguard against other contagious diseases.

The following additional bits of advice about avoiding a cold are also offered: Keep the body in good general condition, for the cold virus does its most effective work when the physical resistance has fallen to a low ebb. Eat plenty of good, wholesome food, with special attention to milk and dairy products, citrus fruits, tomatoes, green and yellow vegetables (raw and cooked) and eggs. Eat regularly and allow yourself enough time to eat slowly. Drink plenty of water throughout the day. Take lots of exercise in the open air. Get plenty of rest, including sleep. Do not become overheated by sitting or working all day in a room at too high a temperature or by wearing too much heavy clothing indoors. Do not work all day long with wet feet. Wear overshoes, if possible, in rainy weather. If the feet become wet on the way to work, take off the shoes and hose and dry them. If the clothing gets wet, a quick change should be made to dry clothing. Keep the rooms where you work and sleep well ventilated at all times.

Whenever one contracts a cold, these measures should be intensified, and the victim's entire mode of life should be so arranged as to protect others and give the body all the rest it can possibly obtain. The quickest means of conquering this form of illness is to go to bed and stay there until one is well, but many people with jobs feel that they cannot do this. They should at

least spend every minute they can in bed while not at work. And the intake of water, fruit juices and other liquids should be stepped up, while the patient cuts down on heavy food. If symptoms do not disappear fairly promptly under this self-imposed regimen, a physician should be called.

Much more serious than the common cold and, fortunately, much less common is influenza. Contracting it is often one of the penalties of neglecting a bad cold or of doing the wrong thing through following one's own ideas as to what should be done or following the advice of well-meaning but medically uninformed friends and relatives.

There are few persons who have not had influenza at least once in their lives. Many people have several encounters with it on their medical records, and an unfortunate few consider themselves lucky if they get through a winter without having to spend a few days in bed because of it.

The symptoms of influenza therefore are pretty well known. They are in general those of a bad cold, usually intensified, plus some others more or less peculiar to this disease. These latter include elevation of body temperature and aching in various parts of the body, especially the back and head. The influenza victim is particularly conscious of a feeling of extreme fatigue and even utter exhaustion.

That exhaustion becomes even more apparent whenever he tries to move about or do any work, and he thus does not usually find it hard to stay in bed. On the contrary, it is often difficult to get out of bed and move about. In that way nature comes to the aid of the healing process, and the bed rest which is desirable whenever one has a cold is well nigh inevitable whenever the more serious disease develops. If the influenza victim becomes sufficiently concerned over his condition to call a physician, his chances of recovery promptly and satisfactorily are substantially improved.

Failure to obtain prompt medical attention or failure to follow the physician's instructions as soon as the patient begins to feel better may bring on the far more dangerous pneumonia. How grave a threat that is to health and even to life itself is emphasized by the vital statistics reports. These show that only four forms of illness—heart disease, brain hemorrhage, nephritis or Bright's disease, and cancer—killed

more Alabamians last year than this one. They show, moreover, that more than one death out of every 17 occurring from known causes in this State last year was caused by this single illness.

It would be incorrect to say that pneumonia is an extreme form of influenza. The two diseases are separate and are caused by different types of organisms, just as malaria and typhoid are. This, however, is not inconsistent with the statement just made that a person who neglects a bad cold or a case of influenza greatly increases the chance of contracting pneumonia. Those milder diseases lower the body's resistance dangerously, and when a person is exposed to pneumonia at such a time the germs of that disease find fertile soil. The same is true of sudden chilling of the body, chronic intoxication, overwork, lack of rest, and a failure to build up the body's nutritional defenses by means of good, wholesome food.

Usually the onset of pneumonia is sudden, almost dramatic. The first warning that the victim and his family have is usually a chill. The temperature rises sharply. The patient begins coughing. There is usually a sharp pain in the chest or side. He probably begins raising the sputum characteristic of this disease, thick and rust-colored.

The calling of the physician which may not have been necessary when the patient had a cold or even when the cold was succeeded by influenza is now essential. Meanwhile, the patient should be kept in bed. In many cases a nurse is needed, but whether that is necessary in a particular case should be decided by the attending physician.

Fortunately, the outlook for the pneumonia victim is much more cheerful than it was a few years ago. While several recent developments have contributed to this brightening of the picture, the chief contribution has undoubtedly been made by the sulfa drugs, which have been used with remarkable success. There are several of these, and a physician decides which particular one he will use in a particular case after studying that case and the peculiar health status of the victim.

Obviously, however, the pneumonia patient's outlook is bright only by comparison with what it was a decade or two ago. Considered solely upon the basis of this disease's death-bringing potentialities, it is still seri-

ous. It is the part of wisdom, therefore, to prevent this disease, if possible. It is also an indication of health wisdom to avoid colds and influenza, which, less serious though they are, have dangerous potentialities. A little extra care during the next six months may pay rich dividends in good health, increased working efficiency and the ability to stay on the job.

BUREAU OF SANITATION

T. H. Milford, M. S. in S. E., Director

THE OPERATION OF A DDT RESIDUAL SPRAYING PROGRAM IN ALABAMA

Contributed by

W. P. Warner, B. S. in M. E.

Senior Assistant Engineer (R), USPHS

In the spring of this year, a malaria control program, utilizing DDT (dichloro-diphenyl-trichloroethane) as a residual house spray, was inaugurated by the U. S. Public Health Service and State Health Department in six Alabama counties. The primary purpose of this program is to combat the *Anopheles quadrimaculatus* mosquito, which mosquito is responsible for the transmission of malaria in this section of the country.

The six counties, namely, Autauga, Dallas, Greene, Lowndes, Marengo and Montgomery, selected to participate in this program are among the most malarious counties in the state. This control work by DDT spraying is being performed in only the most malarious, rural areas of these counties. Other control methods are used in malarious urban areas.

Since DDT is a contact poison, it is necessary for mosquitoes and other insects actually to come in contact with it before it is effective in controlling them. Therefore, it is desirable to distribute the DDT uniformly over resting surfaces of the mosquito, such as walls and ceilings of houses, in sufficient quantities that the resting mosquito will obtain a toxic dose within a short time. The DDT as received by the State Health Department is in a fine white powder form. In this form, it cannot be applied to walls and ceilings in such a manner as to be effective against mosquitoes and other winged insects. It is necessary to apply it in liquid

form so that upon the drying of the liquid spray, tiny, almost invisible, DDT crystals are left on the surface treated. This liquid form is prepared by dissolving the DDT powder in a suitable solvent (DDT is insoluble in water) and by adding the proper amount of an emulsifier, which forms, in this case, a 35% DDT emulsion concentrate. This concentrate is diluted with water to form a mixture for the final spray which contains approximately 2½% DDT.

For the program in Alabama, the concentrate is mixed at central mixing plants, and transported to the project, where the water, obtained at the site, is added. Thus, over 90% by volume of the final spray is obtained at the house or site of spraying.

Each spraying crew consists of three men—two sprayers and a foreman. The foreman is furnished with a map of the area in which he is to work, with the location of all roads and houses shown thereon. Each house is given a number. Upon arriving at a spraying site, the foreman explains to the house occupant the purpose of their visit, while the other two members of the crew prepare the equipment and solution for spraying. A complete record is kept by the foreman as to house number, date sprayed, amount of spray used and signature of house occupant indicating that approval of spraying was secured. Transportation for the crew and equipment is by pick-up type trucks or other similar type vehicle, all of Army design with 4-wheel drive, which have proved very satisfactory in reaching the most remote sections over roads which would be impassable to many other type vehicles.

The work in Alabama has been done entirely by hand spraying equipment. A 4-gallon capacity, compressed air hand sprayer, similar to the commonly used orchard type sprayer, is used to apply the spray to the walls and ceilings of the houses. This sprayer is equipped with a nozzle which delivers a fan-shape spray, with the sides forming an angle of about 80 degrees.

Before any houses were actually sprayed, the crews were trained in the proper manner to spray, rate of travel with the sprayer in order to insure the proper amount being applied, and where to spray. They were taught to use the sprayer and nozzle, just as if it were a brush applying paint to a surface. They were cautioned to use extreme

care to see that none of the spray liquid got on furniture or food and other articles in the house. These are moved, with the assistance of the house occupants, to the center of the room, where, prior to the beginning of spraying, they are covered with cover cloths carried by the crew. Only a short time is required to spray the average size house, and from 30 minutes to one hour after a house has been sprayed, there is no appreciable odor and the walls are dry once again.

The spraying cycle was set at three months, assuming that one spraying would be effective that long. By mid-summer of this year, over 18,000 houses had been sprayed the first time, and the second spraying had begun.

Although, as previously stated, this spraying program was primarily designed to combat mosquitoes, reports have been received, from those whose homes were treated, which indicate that the DDT was very successful in the control of other insects, such as house flies, roaches, bedbugs and, in some instances, small mice. The mattresses and bed springs are sprayed if so desired by the occupants, and effective results are obtained. In one case, the recipient of this service remarked that he had been able to get a full night's sleep for the first time in years. Very few refusals for the spraying were encountered on the first spraying, and the acceptance for a second spraying has been almost unanimous.

If the response of those receiving this free service can be taken as a measure of its success in reducing the population of mosquitoes and other insects at those places where DDT was sprayed, it can be said that the program has been highly successful in accomplishing what was planned.

Acute Barbiturate Poisoning—Usually the patient is comatose, but may exhibit marked psychomotor stimulation. The pupils are contracted or dilated with a sluggish or absent accommodation to light. The respirations may be slow and shallow, or rapid and shallow, and cyanosis is not uncommon. The reflexes are usually sluggish or absent. The blood pressure is generally lowered and the pulse rapid and thready. Death occurs following respiratory arrest, circulatory collapse or, at a later date, from bronchopneumonia or other pulmonary complications. Diagnosis may be aided by recovery of colored gelatin capsules in the return from a gastric lavage.—*Percy and Edgar, South. M. J., Nov. '45.*

BUREAU OF VITAL STATISTICS

Miss Ethel R. Hawley, Acting Director

PROVISIONAL MORTALITY STATISTICS

REPORTED BIRTHS, STILLBIRTHS, DEATHS FROM
CERTAIN IMPORTANT CAUSES AND RATES*—

ALABAMA, JULY 1945, 1944, 1943

Births, Stillbirths and Causes of Deaths	Number of Deaths Registered— July 1945			Rate (Annual Basis)		
	White	Colored	Total	1945	1944	1943
Births, exclusive of stillbirths	6399	**	**	26.0	28.5	26.8
Stillbirths	161	**	**	24.5	27.6	32.6
Deaths, exclusive of stillbirths	2058	1159	899	8.4	9.2	9.3
Infant deaths, under one year	257	140	117	40.2	43.5	48.2
Under one month	150	85	65	23.4	26.0	29.8
Typhoid and paratyphoid 1, 2	3	2	1	1.2	1.3	1.7
Epidemic cerebro-spinal meningitis 6	4	2	2	1.6	1.7	2.5
Scarlet fever 8	8	2	6	3.3	3.4	8.4
Whooping cough 9	8	2	6	3.3	3.4	8.4
Diphtheria 10				0.8	0.4	
Tuberculosis, all forms 13-22	100	35	65	40.7	36.0	48.2
Malaria 28	10	4	6	4.1	2.1	3.8
Syphilis 30	35	12	23	14.2	14.0	13.5
Influenza 33	8	3	5	3.3	4.6	3.8
Measles 35	1	1		0.4	1.3	0.4
Poliomyelitis 36	1	1		0.4	0.4	0.4
Encephalitis 37	1	1		0.4	0.4	
Typhus fever 39	5	3	2	2.0	2.5	0.4
Cancer, all forms 45-55	218	148	70	88.7	75.4	68.0
Diabetes mellitus 61	22	15	7	9.0	9.7	13.9
Pellagra 69	10	8	2	4.1	3.0	3.0
Alcoholism 77	1	1		0.4		0.8
Intracranial lesions 83	218	117	101	88.7	92.3	74.8
Diseases of the heart 90-95	347	217	130	141.2	194.4	169.4
Diseases of the arteries 96-99	19	15	4	7.7	11.4	9.7
Bronchitis 106	3	3		1.2	2.1	2.1
Pneumonia, all forms 107-109	80	31	49	32.5	34.7	35.9
Diarrhea and enteritis (under two) 119	32	17	15	13.0	24.1	20.7
Diarrhea and enteritis (two and over) 120	3	3		1.2	5.5	7.6
Appendicitis 121	17	10	7	6.9	8.0	10.6
Hernia, intestinal obstruction 122	25	13	12	10.2	7.2	7.6
Cirrhosis of the liver 124	4	1	3	1.6	3.4	4.6
Nephritis, all forms 130-132	154	87	67	62.7	64.0	70.1
Diseases of the puerperal state 140-150	17	8	9	25.9	44.8	36.6
Puerperal septicemia 140, 142a, 147	7	4	3	10.7	10.1	12.2
Suicide 163-164	13	12	7	5.3	6.8	5.1
Homicide 165-168	35	14	21	14.2	11.8	9.7
Accidental deaths (exclusive of motor vehicle) 169, 171-195	121	74	47	49.2	54.2	55.3
Motor vehicle 170	37	30	7	15.1	16.5	17.3
All other known causes	357	226	131	145.2	143.6	169.3
Ill-defined and unknown causes 199-200	149	43	106	60.6	75.4	78.6

**Not available.

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific causes per 100,000 population; from puerperal causes, per 10,000 total births.

BUREAU OF PREVENTABLE DISEASES

D. G. Gill, M. D., Director

CURRENT MORBIDITY STATISTICS

1945

	July	Aug.	E. E.*
			Aug.
Typhoid	16	13	65
Typhus	75	98	73
Malaria	303	468	892
Smallpox	1	0	0
Measles	10	4	29
Scarlet fever	29	50	45
Whooping cough	98	88	110
Diphtheria	22	47	43
Influenza	20	123	39
Mumps	62	36	28
Poliomyelitis	23	24	13
Encephalitis	0	1	1
Chickenpox	7	5	5
Tetanus	0	6	4
Tuberculosis	180	344	255
Pellagra	5	2	18
Meningitis	20	7	7
Pneumonia	133	140	96
Syphilis	888	912	1367
Chancroid	8	7	12
Gonorrhea	1192	820	521
Ophthalmia	0	0	1
Trachoma	0	0	0
Tularemia	0	1	1
Undulant fever	8	15	7
Dengue	0	0	0
Amebic dysentery	9	3	0
Cancer	179	189	0
Rabies—Human cases	1	0	0
Positive animal heads	70	58	

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

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The Future of Medicine—Our natural reluctance to discard time-tried and highly successful methods of practice for methods of questionable merit has been interpreted by some of our critics as protection of a so-called "vested interest." If we have a "vested interest" to protect, I fail to see it, for surely, as individuals, we have little to lose or gain of a material nature regardless of changes in methods of distributing medical service. The practice of medicine will always be a respectable occupation and anyone willing to work can always make a living in medical practice, provided he has the medical ability.—Fitzgibbon, J. M. A. Tennessee, Oct. '45.

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BACKGROUND

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orally, ADRENALIN relieves severe attacks of bronchial asthma by relaxing the bronchial muscles.

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CHOICE OF ANESTHETIC

ALFRED HABEEB, M. D.

and

HIRAM R. ELLIOTT, M. D.

Fairfield, Alabama

The choice of an anesthetic agent and the method to be used should be determined by the type of operation to be done and the general condition and age of the patient. In choosing an agent and method, the safety of the patient must be the paramount consideration. When we speak of safety we go beyond the induction period of anesthesia. The complete procedure must be considered, including the postoperative time. Too often the patient has been made to fit the anesthetic.

Modern advances in anesthesiology have brought this specialty to an important place in the field of medicine. Men trained in anesthesiology have much to offer the patient and the surgeon. During the "nitrous oxide and ether days" it was the surgeon who dominated the rate, induction and depth of the anesthetic. The surgeon of today has revealed his willingness to keep "hands off," so to speak, if a trained anesthesiologist is available. If we must admit the truth, a physician trained in this specialty has the better chance of maintaining, as near normal as possible, the physiology of an anesthetized patient. We must admit, too, that maintaining normal physiology of the respiratory and circulatory systems is of utmost importance in keeping morbidity and postoperative complications at a minimum.

From the Department of Anesthesiology, Employees Hospital, Fairfield.

Read before the April 1945 meeting of the staff of St. Vincent's Hospital, Birmingham.

Read before the October 1945 meeting of the Jefferson County Medical Society, Birmingham.

The choice of an anesthetic should be made, not the morning of the operation, but the day before, if possible. This certainly should be the case in elective operations. Before deciding on an agent, the physical condition of the patient must be evaluated, the type of operation understood, as well as the mental and emotional make-up of the individual. For this reason it is important that the surgeon, the medical man and the anesthesiologist work hand-in-hand. Such team work produces the best surgical results. For instance, one would not administer sodium pentothal to an aged patient with marked fibrosis of the lung tissue; nor would one give a spinal to a pre-shocked individual.

A patient scheduled for operation has every reason to be apprehensive. He asks questions such as: "Will I be asleep?" "Will I wake up again?" "Will I know when the operation starts?" "If I'm given a spinal, will I be paralyzed?" "Will I suffocate?" "How sick will I be after the operation?" Unfortunately, he usually knows of someone who died under ether, spinal, cyclopropane or whatever agent is to be used. He is anxious. The alleviation of this fear and emotional condition makes for a good anesthetic. We try to reassure the patient and tell him in common, every-day words just what he can expect during the induction period and the events that are to follow.

We consider premedication a part of an anesthetic. A cool, calm patient at the time of operation makes the job just that much smoother. Surely, no one would consider a spinal on an unpremedicated patient; nor

would one consider an inhalation anesthesia without atropine to prevent secretion and decrease laryngospasm, and sedation to decrease the amount of anesthetic agent necessary for the operation.

Seely and Essex in their investigation of traumatic shock under certain anesthetic agents made the observation that the administration of a barbiturate delayed very definitely the onset of shock and death in experimental animals. They revealed that morphine was not as effective used alone as when used in combination with atropine or scopolamine. For the average adult patient we give pantopon grs. 1/3, scopolamine grs. 1/150, one hour and thirty minutes before the operation, and nembutal suppository grs. 2 or 3, forty-five minutes before the operation.

We prefer the barbiturate rectally in order to make unnecessary the glass of water which is ordinarily used as a chaser. Given by rectum this will decrease the nausea and vomiting markedly. Barbiturate given by mouth in equal doses is far more effective than the rectal route. For spinal cases, where the peritoneum is not entered, we give the barbiturate by mouth.

Our pentothal cases receive pantopon grs. 1/3, atropine grs. 1/150, thirty to forty-five minutes before the operation. For patients in severe pain, such as occurs in ruptured peptic ulcer, morphine sulphate is recommended intravenously. Grains 1/8 to 1/6 is the usual dose. Patients in extreme pain and in circulatory shock should be given morphine intravenously.

Morphine given hypodermically to a patient with a circulatory collapse will produce only a minimum effect, the circulation being too poor to pick up the morphine. Neither morphine nor pantopon is recommended for children under fourteen years of age. However, we do not hesitate to use codeine in children over six years of age.

Chloroform: There are many men today who say there is no place in the field of anesthesiology for chloroform. This agent has the highest potency and lowest margin of safety. Our experience with this agent is limited. There are too many other agents that are safer and better. The liver damage that may be produced is too risky. Experimental work shows that normal liver function does not return for two to three days after a chloroform anesthetic. The fact

that it is noninflammable is its only advantage.

Ether: This is an anesthetic agent with a wide margin of safety. It is most fortunate that ether was the first anesthetic agent discovered. It is powerful and easy to give. However, it is not without toxic actions. It is irritating to the respiratory tract and tends to produce pulmonary complications. It has a dilatory effect on the stomach and intestines, with mucous production, which increases the postoperative discomforts. It raises the blood sugar 100 mgms. or more even in normal patients, and may produce acidosis. Ether depresses the function of the liver and the kidneys. It should never be used in cases of diabetes and nephritis. In our hands ether serves well for tonsillectomies and adenoidectomies, and for other surgical procedures on children. Due to its unpleasant odor, induction is usually produced with sodium pentothal in children. We recommend a very weak solution, 1½%. Ether is used to an advantage with cyclopropane for abdominal surgery when relaxation is necessary. Ether plays an important role in surgery of the spleen in either children or adults. Under ether the normal spleen contracts one or two times the actual size, thus making surgery easier. Under spinal and cyclopropane the spleen increases in size two or three times.

Nitrous Oxide is the weakest of all inhalation anesthetics. Its chief values are that it is noninflammable and very safe, but the margin between anesthesia and asphyxia is quite narrow. It is practically impossible to use nitrous oxide and oxygen without anoxemia. This is the opinion of most anesthesiologists. Anoxemia produces liver damage, cerebral damage, and damage to the kidneys. Anoxemia will elevate blood sugar and produce acidosis. We recommend nitrous oxide as a supplement with sodium pentothal or ether. Nitrous oxide has been used to advantage with local and rectal anesthesia; when used in such manner it is considered not an anesthetic but rather an analgesic.

Ethylene is a potent, nonirritating, and highly explosive anesthetic agent. It has properties which come between nitrous oxide and cyclopropane. It has all the advantages over nitrous oxide, with the exception of explosive properties. A large

amount of oxygen can be used with it, thus lessening or avoiding anoxemia. Since both have explosive properties, we prefer cyclopropane.

Cyclopropane is today considered one of the best anesthetic gases in use. It is pleasant and odorless, induction is rapid, and recovery is smooth; it also lessens nausea. Its toxicity is low in moderate concentration, having little or no effect on the liver, kidneys, and acid-base mechanism. It has the unfortunate disadvantage in being moderately explosive, so adequate precautions should be taken. It is more powerful than nitrous oxide and ethylene, and should be administered with skill and experience. It is the one anesthetic agent that is desirable for practically all types of patients, but its use is of greater importance in those patients with pathological conditions. Its direct action on the parasympathetic system elevates the blood pressure, and its high oxygen content makes it an ideal anesthetic agent for the emergency hemorrhage and poor risk patient. Its adequate oxygen and its nonirritating properties make it the choice in the field of thoracic surgery. Cyclopropane is the ideal selection for the normal obstetrical patient. We consider it the preferred agent for thyroidectomy and in breast amputations. It may be used in conjunction with sodium pentothal. Cyclopropane should not be used in the moderately advanced heart conditions. Cyclopropane has a depressing action on the heart muscle and should not be used in toxic goiters, or on any patient with marked cardiac damage. Cyclopropane has a limited application in children because of the closed method in which it is administered. It is difficult to obtain full cooperation from a child with a tight mask fitted over his face. The leakage of cyclopropane increases the chances of explosion. It is not advisable and should not be used in the face of an electric cautery. There are those surgeons who complain of the increased blood oozing under cyclopropane. To that we agree, but we believe this can be decreased if the field is sponged lightly, rather than wiped roughly. Cyclopropane is the best anesthetic when curare is used.

Sodium Pentothal is a member of the barbiturate family which has today become the layman's choice of an anesthetic. Its smooth and rapid induction and the sel-

dom seen postnausea and vomiting have given it this honor. Adams has estimated that sodium pentothal is 30 to 40% more potent than evipal, but with no apparent increase in toxicity. This agent, therefore, produces a better anesthetic for a wide range of surgery. This drug was first introduced by Lundy in 1934. In our hands, we find sodium pentothal the choice anesthetic for minor surgery, as well as a supplement to spinal anesthetic for upper abdominal surgery. Preliminary medication of pantopon grs. 1/3, atropine grs. 1/150, 30 to 45 minutes before the operation, is considered essential for a better anesthetic. Since only seconds are required to produce anesthesia with this agent, we recommend that the administration be started when the surgeon is ready to operate. Nasal or mask oxygen may be administered, but it is not considered essential in the five to ten minute procedures. Sodium pentothal is the ideal anesthetic for the emergency traumatic case, provided the patient is in good condition.

Sodium pentothal is not without its contraindications. This agent in safe doses will not obliterate the pharyngeal and laryngeal reflexes, and, therefore, should not be used in operations of the throat. Adams states that in safe doses sodium pentothal will not obliterate the abdominal or peritoneal reflexes and, therefore, should not be used for intra-abdominal operations. Sodium pentothal should not be used in patients with pulmonary disease or those with low vital capacity. Sodium pentothal is contraindicated in children if the procedure is to require more than ten minutes. The air passages are smaller in children. We use it freely in children for procedures lasting only a few minutes, but usually in 1½% solution. Sodium pentothal is contraindicated in patients with circulatory disturbances, such as anemia. Vaizy reports a case of toxic jaundice following pentothal for a hemorrhoidectomy.

He attributes the jaundice to anoxemia due to depression of respiration in an anemic patient. We hesitate to give sodium pentothal to a jaundiced patient. It has been proved experimentally by Adraini, Rovenstine and Reynolds that sodium pentothal produces some liver damage. The liver necrosis is more pronounced when the animal has been given one of the sulfa drugs. Pen-

tothal should not be given to the extremes of age, certainly when a long procedure is anticipated. The drop in blood pressure under sodium pentothal is due to (a) depth of narcosis, (b) reduced sympathetic activities and (c) oxygen lack.

Spinal Anesthesia: From the patient's choice of anesthetic agent, sodium pentothal, we approach the surgeon's choice, spinal anesthesia. There can be no argument as to its advantages in surgery. No other anesthetic agent can approach the marked relaxation obtained by spinal. Such marked relaxation not only makes it easier for the surgeon to perform his job but also decreases postoperative complications by shortening the operative time.

The importance of the duration of the operation has received insufficient attention. Waters, Bennett and Taylor showed that the incidence of complications, all complications, to range from 2.9 for an operation of one half hour, through decided successive stages for each half hour the operation is prolonged, to thirty per cent for one lasting three hours to three and one-half hours.

Rovenstine found that the incidence of complications for operations lasting half hour to double those lasting one hour. We do not discuss spinal without frankly admitting some of its dangers. However, in the hands of an experienced and skilled anesthesiologist the onset of these danger points can be caught in time and prevented. Spinal anesthesia in certain cases, though carefully administered, may produce respiratory paralysis. This, however, can be easily handled with oxygen bag and positive pressure.

The main fear in spinal anesthesia is the control of blood pressure. For this reason we recommend that intravenous glucose be started at the onset of the operation on all patients under spinal anesthesia. By that we mean all major cases. Our choice of vasoconstrictor drugs for the control of blood pressure are neosynephrin and ephedrine. They may be administered intravenously or subcutaneously. To prevent a drop in blood pressure during spinal anesthesia is as much of prophylactic role as that of a therapeutic one. The surgeon plays a great part. Blood pressure under high spinal cannot tolerate unnecessary surgical trauma. Rovenstine states that high spinal anesthesia is not the choice for an operation which

must be completed with severe loss of blood and excessive trauma.

There are several theories as to the fall in blood pressure. The three main ones are:

1. The toxic absorption of the drug administered. This we know plays some part but is of no great importance. This theory has been proved to us in the use of pontocaine crystals. When the crystals are used the patient will experience more toxic reactions than from the solution. We all know that the crystals are more potent.

2. Paralysis of the vasoconstrictor fibers. This condition produces vasodilatation which accounts for the fall in blood pressure. Rovenstine has shown in experimental animals that animals with spinal nerves anesthetized will get a drop in blood pressure when tissue is traumatized whereas animals without an anesthetic will show increase in blood pressure when the same degree of trauma is applied. For example, if an exploration of the gallbladder is done in a patient under spinal anesthesia, he will show a drop in blood pressure. If, on the other hand, and if it were possible to do, a patient without an anesthetic has an exploration of the gallbladder, he will show an increase in blood pressure. The result here is due to the part that the vasoconstrictors play. The patient under spinal will get his drop because his peripheral vasoconstrictors are knocked out, so to speak.

Keen observation of a patient under spinal anesthesia is of great importance and essential. Knowing what to do when complications arise is of greater importance.

In our hands, spinal has become the choice agent for surgery below the diaphragm. Spinal is ideal for the aged individual who must have a prostatic resection, and ideal for that diabetic individual. What better anesthetic choice can one have than spinal in patients with pulmonary complications.

Rheumatic Heart Disease—The treatment of rheumatic heart disease in children depends not only upon actual medical treatment, but also upon the evaluation of the different phases of this condition. The difficulties experienced in early diagnosis are of such character that many times we do not see these patients until definite valvular disease has been established. For that reason it is of the utmost importance that we evaluate early manifestations of active rheumatic infections.—Yampolsky, J. M. A. Georgia, November 1945.

THE ELECTROCARDIOGRAM

• HISTORY AND CLINICAL APPLICATION

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The electrocardiograph is a relatively new clinical instrument which was first used at about the turn of the century between the years 1900 and 1910. The theory of the electrocardiograph is old, however, and is based entirely on the principle of the old gold-leaf galvanometer which has been employed in physical experiments since about 1800.

In 1887 Waller conducted experiments with the capillary electroscope, attempting to measure the electromotive force associated with the activity of the heart. Shortly after Waller conducted his experiments, Einthoven, a German physicist, became interested in the electrical currents produced in the heart muscle of various lower animals. In general, Einthoven's experiments consisted of the measurement of electrical impulses which were transmitted through the cardiac muscle and also through the nervous system. He used principally the giant nerve of the squid and turtle hearts in his experiments. In order to simplify his experiments and make them more accurate, he developed the string galvanometer, which is the forerunner of the present-day electrocardiograph. Einthoven's galvanometer consisted of a delicate thread of silvered quartz or platinum stretched between the poles of a strong magnet. The thread was illuminated by an arc light and the shadow of the thread thrown upon a screen after being magnified by an ordinary microscope. Electrical currents passing through the string of the galvanometer produced deflections of the string in different directions which were clearly shown on the illuminated screen.

As his work advanced he became interested in the practical application of his experiments and developed the electrocardiograph, which measures the force and direction of electrical impulses which pass through the cardiac muscle of man. The screen was replaced by a roll of photographic film upon which a permanent record of the deflections of the string could be recorded. This machine is the standard

electrocardiograph which is so widely in use today, with the addition of a vacuum tube for the purpose of amplifying the string deflections. No changes in principle and very few mechanical changes have been made to the model as constructed by Einthoven. In fact, some of his original models, with only a few changes, are in use today and are found to be every bit as effective as instruments manufactured at a later date.

It must be remembered and understood that the electrocardiograph reproduces on the graph only the force and direction of the electrical impulses which pass through the heart muscle. These impulses occur *before* the muscular contraction of the heart and do not indicate the actual contraction of the auricles and ventricles. Since this is the case, the whole theory of the use of the electrocardiograph in diagnosing pathological heart conditions is based on whether or not these impulses are transmitted through the heart muscle along their proper courses and in the normal time and with normal force and regularity.

Death or injury to the cardiac muscle or to the conduction system through which these impulses travel to the cardiac muscle cause variations in the route, rapidity, magnitude and rhythm with which the impulses are transmitted. These changes are recorded on the finished graph and are immediately perceptible to anyone familiar with the interpretation of the tracings.

The complete heart examination consists of three parts; namely, history and physical examination, dimensions of the cardiac shadow as shown by the x-ray, and the electrocardiogram. Therefore, no heart examination is complete without the electrocardiogram, nor can the electrocardiogram be considered a complete heart examination in itself.

The condition of the heart muscle as shown by the electrocardiogram is divided into the following groups:

1. Changes in the electrocardiogram which present slightly suggestive evidence of myocardial disease.

Read before the March 1945 staff meeting of the Anniston Memorial Hospital.

2. Changes which present strongly suggestive evidence of myocardial disease.

3. Changes which present definite evidence of myocardial disease.

In many cases in which the above mentioned changes are found, the diagnosis of the condition causing them can not be made directly from the electrocardiogram, but the electrocardiogram is used in conjunction with the x-ray and physical findings in order to establish the diagnosis of the exact disease condition.

On the other hand, there are many conditions of the cardiac muscle which can be definitely indicated or diagnosed from the electrocardiogram alone. A few of these conditions which occur frequently in the everyday practice of medicine are as follows:

1. Dextrocardia and situs inversus.
2. Paroxysmal tachycardia.
3. Auricular fibrillation.
4. Auricular flutter.
5. Ventricular fibrillation.
6. Ventricular flutter.
7. Diseases of the conductive system, such as partial and complete heart block.
8. Coronary thrombosis.
9. Right ventricular strain and left ventricular strain.
10. Angina pectoris, when an attack can be brought on at the time the electrocardiogram is made.
11. Pericarditis.
12. Thyrotoxic heart disease.
13. Congenital anomalies of the heart.
14. Pulmonary embolism, although this is not a cardiac condition.

Present day technique calls for the use of four standard leads in making electrocardiographic tracings. The fourth lead is the most recent and is presumed to be of more value in diagnosis of certain conditions than the original three leads. In addition to the fourth lead, a central terminal exploring chest lead is now in fairly general use, and, by means of this central chest lead, tracings can be made around the entire chest wall from front to back. Clinically, this central chest lead is of great help in locating the exact sight of a myocardial infarction, and is much more valuable in diagnosis than the standard fourth lead.

As can be readily understood from the above discussion, the electrocardiogram can be relied upon to show whether myocardial

disease or injury is present, and in many cases the electrocardiogram will give a definite diagnosis of this condition as well as giving aid as to the prognosis of the case when used by the clinician in conjunction with his study of the patient.

The clinician often wonders how far and to what extent he can rely upon the electrocardiogram in making his diagnosis. The electrocardiogram in itself does not indicate prognosis, it does not indicate the presence of valvular heart disease, nor does it indicate the state of compensation of the heart or of the cardiac reserve. However, if the tracing is definitely abnormal then the patient has heart disease regardless of other clinical data.

We must always remember, however, that the three parts of a complete heart examination must be used together to form a complete picture of any suspected cardiac condition.

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Oral Inflammation—The presence of accumulations of oral debris contributes greatly toward the production of oral tissue inflammations. This in turn causes the lowering of the resistance of these oral tissues so that they are more easily subject to infection which may be produced by ever present pathogenic organisms. In addition to this, there is the danger of constantly ingesting oral organisms, their toxic products, and the decomposing accumulations of the various food remnants. A highly probable relationship is thought to exist between these oral conditions and gastric disorders.

Gingivitis very often results from oral debris and other local irritating factors. Particularly prominent among the etiologic factors of the varying types of gingivitis are many systemic factors such as avitaminosis, the blood dyscrasias, endocrine dysfunction, and metallic poisoning. Rather than itself having many outstanding sequences, gingivitis then may be regarded as an oral sequence of systemic disease. This fact is made very good use of by both physicians and dentists.

In Vincent's gingivitis, however, there are usually associated systemic disturbances, particularly of the gastro-intestinal system.—*Dummett, South. M. J., December 1945.*

ENURESIS

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Since entering our profession, all of us have been familiar with enuresis. Some of us may have childhood recollections of this entity. For the most part we have considered it a behavior problem, either to correct itself or to be outgrown. We wish to bring to your attention in this paper some of the underlying causes of enuresis and their method of deduction, for we believe that by so doing the enuretic and his or her family can be made much more comfortable and happy.

Brodny and Robbins list four factors upon which urinary continence depends:

1. An intelligence quotient adequate to appreciate the social necessity and hygienic desirability of controlling the time and place of voiding.

2. Proper and sufficient habit training to condition urination and voluntary control.

3. The patient must be free of specific neurotic and psychotic symptoms and have an emotional status consistent with his or her age group.

4. A normal voiding mechanism is essential for normal function. In the child, the anatomic and physiologic development must be accordant with the chronologic age.

One or more of the above components may be deficient and if the patient has developed sufficient compensatory factors he will be continent. Likewise, in our treatment of the enuretic, and such treatment develops sufficient compensatory factors to offset those which the patient has deficient, the patient and his family may be happy, but the treatment is insufficient for the patient's well being unless the deficiencies evidenced are removed. A cure is not accomplished by converting enuresis into nocturia. We must remember that one of our standing questions propounded to the prostatic patient is: "How long have you been getting up at night to void." Recognizing his nocturia and prostatic enlargement as possibly originating simultaneously, we find, as in most of these cases, that his nocturia increases as the prostatism advances.

The proper classification of enuresis demands our investigation of the four factors of urinary continence, working with the

pediatrician, psychiatrist, and roentgenologist where and when necessary since the majority of cases are not of a pure type, and in many instances deep-seated combinations of the component factors will be found. Enuresis of a given type may agitate another type. Undoubtedly a patient with primary organic enuresis will in some cases develop marked secondary emotional disturbances. Likewise the patient with primary sexual disturbances may develop secondary organic changes in the deep urethra.

It has not been many years since the opinion was advanced that enuresis was a problem for the pediatrician, but the recent experiences of the armed forces has brought it forcibly to our minds that many adults are bed-wetters, and that malingerer is not the underlying factor in a large percentage of these.

The public has long associated bed-wetting with feeble-mindedness, except in early childhood, this because many feeble-minded are bed-wetters. It would indeed be hard for us to establish compensatory changes to offset feeble-mindedness, so it is next to futile for us to hope to cure or change to nocturia these cases unless one or more of the other causative factors are involved, demonstrated and corrected.

Some mothers do not understand habit training, or if they do they do not have the will to put it into effect. When I first began practice in Coosa county many years ago, I was amazed at the number of yearling youngsters still nursing, and, as I now remember, all of these children were bed-wetters. It is readily evident that treatment in these cases would be of no avail without the enuresis being associated with one or more of the other factors unless we obtained the full cooperation of the mother.

Two years ago a mother brought us two of her children, each an enuretic, a little girl of nine and a boy age seven. Careful examination and study of these cases revealed that the little girl had an organic condition wherein the urethra evidenced a low grade urethritis, with a narrowing just anterior to the vesical neck (stricture). The little boy had a large meatus with a bladder of good

capacity, together with good functional ability associated with adequate propulsion and cut-off power. It developed that the little girl was an enuretic on account of her organic uropathy. She slept with her brother (as her mother did not want two beds to dry daily), and when she wet the bed—and her brother—he awoke, and with deliberation, as he expressed it, “peed back at her.” The treatment may not always be as obvious as in these cases, but a careful examination and a painstaking study will achieve the answer.

Should the patient present definite psychotic symptoms, or is a specific neurotic, with or without an emotional status which is inconsistent with that found in the average for his or her age group, a careful psychiatric examination is in order, as well as a urological going over to rule out organic disease. If no organic disease is discovered, the problem is for the neuropsychiatrist.

If diurnal and nocturnal enuresis persists beyond the second and third years, it is advisable to have a careful urologic examination to exclude any organic condition which might lead to this symptom. If the enuretic is such because of organic uropathy, the question naturally arises as to which is the best procedure for the urologist to pursue. Cysto-urethrography is a simple office procedure and is usually adequate for the routine examination of the enuretic patient in the pre-adolescent period. If one has sufficient experience, this procedure will prove as valuable for the study of the lower urinary tract as pyelography is for the study of renal pathology.

Cystoscopic examination in children who are very young requires a general anesthetic and, unless the symptoms warrant, should not be gone into. In our hands cystoscopy has proven most valuable and at the same time harmless to the patient.

Campbell, in a study of 1,500 enuretic children subjected to urologic examination after intensive medical treatment had been ineffectual, found that organic urologic disease existed in 50 to 60%.

The enuretic patient who has advanced to adult life, as well as the adult with latent enuresis, has an organic condition which is the cause, and a cure can be established only by its being corrected.

This point is well illustrated by the following cases: (a) A young lady who was

engaged to be married came in with a history of life-long enuresis. A congenital valve, which almost occluded the vesical neck, was found wherein the back pressure on micturition had increased the bladder capacity by one-third and caused a grade one hydronephrosis on either side. The correction of this urethral condition brought about complete cessation of the enuresis, accompanied by untold relief to her mental and physical being. (b) A patient, age 64, came in with a history of having to have pads under him at night because he wet the bed. This had been going on for two years. Examination showed an upright growth at the vesical neck which held the posterior valve or vesical sphincter open. During his waking hours he could control his enuresis by closing tight the valve at the bulbomembranous junction. When he went to sleep, this valve relaxed and the urine flowed since the vesical sphincter was held open by the growth. Removal of the upright growth at the vesical neck brought about cessation of his troublesome symptom of enuresis. (c) A patient walked into our office and, on being queried, said: “Doctor, I am getting to be the champion bed-wetter of Mobile.” Examination disclosed an enlargement of the prostate gland which was, for the most part, intra-urethral. This was causing a reflex which allowed the sphincters to be forced open by contraction of the detrusor muscles, and discharge of the bladder contents. (d) This patient, age 19, male, had been an intermittent enuretic all of his life. After a long cessation he reached adolescence and began all over again with renewed enuretic ability. A large inflamed verumontanum was found, accompanied by considerable inflammatory evidence in the posterior urethra. Further questioning brought out that the patient indulged in excessive sexual excitement. Treatment directed toward the correction of these findings resulted in a complete cessation of his urinary disturbances. (e) This patient was referred to us after being discharged for enuresis by the Medical Department of the U. S. Navy. History revealed that he had always been an enuretic. He stated that he took more “guying” than any one could imagine the three months he was in the Navy. We did a cysto-urethroscopic examination after a filiform stricture at the bulbomembranous junction was dilated. This

examination revealed an enlarged verumontanum with adhesive bands attached from it to the wall of the urethra posteriorly. Division of these bands, with gradual dilatation with Walther sounds to size 32 F. and topical application of silver nitrate crystals endoscopically to the inflamed verumontanum, was followed by a clearing of all symptoms and a urine that was free of microscopic evidence of pathology.

When a careful examination reveals no organic involvements in the urethra or vesical neck, and other causative factors are not noticeably present, medication with belladonna mixtures or ephedrine are at times efficacious. Very little can be expected from medication until after the removal of the uropathy in the 60% where such conditions are the underlying cause of the enuresis.

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MARION SIMS AND OTHER 19TH CENTURY PIONEERS

THE DAWN OF SCIENTIFIC MEDICINE AND SURGERY

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Lister. Joseph Lister (1827-1912) was the greatest Englishman, or Britisher, who has lived; and he is second only to Pasteur as a benefactor of mankind. He was born of Quaker parentage near, and educated in, London. After graduation in medicine in 1852 he was an assistant for five years to James Syme, professor of surgery in the University of Edinburgh. Lister's greatest accomplishment in Edinburgh was to marry Agnes Syme, the beautiful and accomplished daughter of the great Scotch surgeon, in 1856. He was made professor of surgery in the University of Glasgow in 1860. There he continued the study of healing in wounds begun in Edinburgh.

Lister was appalled at the high mortality in the surgical wards of the Royal Infirmary of Glasgow. They were not higher there, however, than in any other hospital in the world of that time. Lister reported a death rate of forty-five per cent in his own amputations in 1864. In studying the causes for infections, in practically all operations, he was convinced that lack of cleanliness of the hospital was one factor. He observed that simple fractures in which there was no open wound usually healed without any trouble; while patients who had compound fractures, in which there was an open wound, usually developed gangrene or septicemia and died. He concluded that something from the air infected the open wound.

In 1864 Lister's friend, Thomas Anderson, professor of chemistry in the University of

Glasgow, suggested that he read Pasteur's address delivered before the French Academy of Sciences in Paris in 1862, in which he reported his researches on fermentation and putrefaction. Lister, on reading Pasteur's proof that microbes from the air caused fermentation of wine and the putrefaction of meats, concluded that if he could exclude micro-organisms in the air from clean wounds, they would heal without inflammation.

With this idea dominant in his mind, Lister went to work to develop methods to prevent the entrance of germs into wounds. Carbolic acid was known to be a deodorizer and Lister surmised that it would kill micro-organisms that he believed were the cause of inflammation, gangrene and septicemia. He used a five per cent solution to disinfect his surgical instruments and his hands before operations, and the same solution to disinfect the skin in clean operations and open wounds in accidents. Following the operation he covered the wound with six layers of gauze that had been soaked in the carbolic acid solution to prevent the entrance of germs. He tried that method in his surgical wards of the Royal Infirmary with the result that in a few months in eleven cases of compound fractures there were ten recoveries and only one death.

Lister's first article on his antiseptic technique, "On Compound Fractures," appeared in the London Lancet in March 1867. Another followed on "Preliminary Notice on Abscess," and finally his address before the British Medical Association in Dublin,

entitled "On the Antiseptic Principle in the Practice of Surgery," was published in the same journal. In the last he summarized his results, including a statement that in nine months, in all kinds of operations, not a case of pyemia or hospital gangrene had occurred. In this immortal paper Lister proved, beyond the shadow of a doubt, that the use of his antiseptic methods would prevent infections in clean surgical operations. Any surgeon with an open mind would have adopted methods which should save the lives of his patients. Lister had revolutionized the practice of surgery; but few then established surgeons would admit it.

Following the publication of Lister's article, a flood of papers were published in the medical journals of England, Scotland and Ireland attacking Lister and his methods. Among the bitterest antagonists of Lister was Sir James Simpson, who had silenced his critics on the use of chloroform in midwifery, but who was vanquished by Lister in reply to articles in which Simpson questioned his veracity. Sir James derided as "mythical fungi" the micro-organisms described by Pasteur as being the cause of fermentation and putrefaction, and on which Lister based his "antiseptic principle" in surgery. Sir James Simpson was a traditional adversary of James Syme, and his mind was closed to anything worth while that the son-in-law, Joseph Lister, could do. Syme defended Lister, and accused Simpson and others of an attempt to "filch away the credit due him" [Lister].

Marion Sims was one of the first great surgeons to adopt Lister's antiseptic technique. He no doubt was a believer in Pasteur's theory of micro-organisms as the cause of fermentation and putrefaction before Lister had read Pasteur's article on that subject. Sims was President of the American Medical Association when Lister came to the United States to attend the International Congress of Surgery, held at the Centennial Exhibition in Philadelphia in 1876, and was one of his hosts while in New York. Up to that time there were few American surgeons who used, or believed in, Lister's methods. Lister's tour of the United States and Canada, when he visited Boston, New York, Philadelphia, Salt Lake City, San Francisco, Toronto and Montreal, stimulated an interest in antisepsis in surgery; and he convinced many of the leading sur-

geons in America of the value of his method. There were many skeptics, however, whom he did not convince, as shown by the fact that at a meeting of the American Surgical Association in 1883 most of the speakers opposed the Listerian theory.

In October 1877 Sims, then in Paris on a visit, published a letter in the British Medical Journal commenting on Lister's first address as professor of surgery in King's College, London. Excerpts from that letter show that Sims visualized asepsis in surgery years before the Germans proved its value. Sims said:

"For a long time, I have been fully convinced of the value of antisepticism in surgery. It is certainly one of the great advances, if not the greatest, of the age; and I am surprised that the profession have been so slow in adopting it . . . For myself, I accept Professor Lister's theories out and out. His results, whether his theory is true or false, are all that he claims and all that could be desired. Why, then, I repeat, are we so slow to adopt his method? The objections that I have heard urged against it are these: 1. It takes too much time; 2. It is too complex; 3. It is too expensive. Now, I would most respectfully ask Professor Lister, 'Is it not possible to simplify the dressing so as to do away with all these objections and at the same time insure the same successful results?' Seven years ago, it was my great privilege to spend a whole day enjoying the hospitality of my friend, Professor Lister. By reading his philosophic papers before my visit, I was fully convinced of the truth of his theories; and by witnessing the results of his practice, I was equally convinced of the value of his method. At that time, it occurred to me to ask the question above propounded; but I could not, and did not. I was prompted to it by seeing in his laboratory a score or more of flasks with long necks, stoppered only with a clean cotton wool, each flask containing urine, or other putrescible fluids, which have all remained unchanged, some for months and some for years. These curious experiments embody a great truth which Lister has for long years implored us to accept and put to practice, but we do not . . .

"Now, if putrescible fluids in a flask can be so easily protected against putrefaction simply with a bit of clean cotton wool, without adding layers of carbolised cloth, why cannot wounds that might take on putrefactive action be protected against this just as thoroughly with a simple covering of clean cotton wool, without these expensive carbolised coverings? . . . For the last ten years, I have used plain clean dry cotton wool as a dressing for the abdominal section in ovariotomy, and I can truly say that no other dressing will compare with it. To kill atmospheric organisms in a glass flask with a long narrow neck, we apply nothing else, and it protects the contained fluid against all change indefinitely. About this there is not the shadow of a doubt.

And to kill atmospheric organisms during surgical operations, we use carbolic acid, dilute sulphurous acid, or other germicide, in spray, and with absolute success. Now, if at this stage of the operation we could simply cover the wound over with cotton wool, as we do the mouth of the purified flask which contains putrescible fluids, it would save us a great deal of time, trouble and money. If the cotton wool 'does not permit the entrance either of the yeast-plant or any other form of dust' in the one instance, why should it in the other? If the cotton wool filters the air from its impurities as it passes through a glass tube, why can it not do the same thing under other and all circumstances? . . . It is, therefore, important that something be done not only to simplify the dressing, but to cheapen it, before it can be generally adopted in hospital practice; and I know of no one so competent to do this as Professor Lister, the father of antiseptic surgery. He has made many modifications of his method since he first published it to the world. Let him go on till he reduces it to that degree of simplicity and perfection that will compel every one to adopt it."

It is of passing interest to note that the simplification of surgical dressings by the use of a layer of cotton over the site of operations was practiced by Sims for a quarter of a century before asepsis, instead of antiseptis, was generally adopted by the best surgeons.

The leading surgeons of London were the last to accept Lister's theories and to adopt his methods. They rose up in arms and protested when it was announced that he had been invited to become professor of surgery in King's College; but Lister, anxious to prove to his fellow countrymen the value of antiseptis in surgery, accepted the position. A majority of the faculty of King's College lined up against Lister. They were so hostile to him that, according to Rhoda Truax, Lister's latest and best biographer, in "Joseph Lister, Father of Modern Surgery," "a student had to care a great deal about pure knowledge to jeopardize his chances of getting a degree by listening to what Mr. Lister had to say." Lister soon won over the students, as he had done the young men in Glasgow and Edinburgh. He said: "From the beginning I had youth on my side."

Every possible obstacle was placed in the way of the new professor of surgery to prevent his views from prevailing. He was laughed at by his erudite confreres; and his "donkey" engine, which generated steam to spray a solution of carbolic acid over the site of operations was the joke of London. Lister worked quietly and patiently. He proved

by his low mortality rates, as compared to those of Wood and his other critics in the same hospital, that his antiseptis in surgery would save human lives.

Lister's triumph in London was complete. He became the leading surgeon of the British metropolis. He was called upon to operate upon Queen Victoria, whose life was threatened by a large abscess. In this operation he used his antiseptic methods, including the derided "donkey engine." The operation was entirely successful and in thanking her surgeon Queen Victoria said it was "a most disagreeable duty most agreeably performed." In her gratitude Queen Victoria made Lister her "Surgeon in Ordinary" in 1878. In 1883 the Queen bestowed upon him the highest honor that had ever been given a physician when she made him a baronet. In 1885 Lord Lister was awarded honorary degrees in Oxford and Cambridge. He also was given the Prussian Order of Merit in the same year.

The "donkey engine" Lister used to generate carbolized steam to destroy germs in operating rooms was discarded by him in 1887, because, as he admitted, "it was valueless." Likewise he abandoned the use of the odoriferous, cumbersome carbolized muslin dressings to substitute for them a layer of sterilized cotton to protect wounds from invasion by pyogenic bacteria. Lister, himself, in the latter years of his practice, adopted the aseptic technique developed by the Germans; but he established a principle, which, when applied by careful surgeons, has enabled them to invade the abdominal cavity, the lungs, the brain and every other organ of the body, when necessary to remove diseased tissue. Surgeons will be saving human lives until the end of time because Joseph Lister had the vision to see the relationship between pathogenic micro-organisms and inflammation, gangrene and erysipelas; and because he developed methods of preventing the invasion of open wounds by pathogenic germs.

Before Lister died in 1912, at the age of eighty-five years, he knew that his principle of protecting wounds from infection was adopted in every country in the world in which scientific surgery is practiced. There were a few surgeons in Edinburgh and London who never forgave Lister for his greatness, and who could not forget that in their efforts to discredit him they exhibited their

own weakness; but he died the best beloved man in the British Empire, and his body is interred in Westminster Abbey, with other immortal Englishmen. So long as medical history is preserved Joseph Lister will be known as the greatest surgeon of all time.

Robert Koch. In 1870 Robert Koch (1843-1910), at the age of 27, served as a medical officer of the German Army in the Franco-Prussian War. Marion Sims, at the age of 57, a Colonel in the French Army, operated on French and German soldiers wounded in the battle of Sedan. Sims had never heard of Koch, who was marked by destiny to develop the science of bacteriology, but every doctor serving in the German Army had heard of Sims. The German government had bestowed the Iron Cross—then an insignia of honor—upon Sims; and he had been given honorary membership in a number of German medical societies.

Operations devised by Sims had been performed by a number of leading German surgeons, some of whom failed to give an American credit for having perfected a procedure which enabled them to cure women of a hopeless condition that sometimes followed prolonged labor. Sims' book on "Uterine Surgery," published simultaneously in Berlin, London and New York in 1865, was revolutionizing the treatment of diseases of women in Germany; his speculum, and other instruments he had devised, were being used by German surgeons—without mentioning that they were the product of his ingenuity. In later years the Germans claimed that gynecology originated in Germany.

Two years after the Franco-Prussian War had ended, Koch's wife made him a birthday present of a microscope. He was then a country doctor in Silesia, in which sheep raising was the principal source of income for peasants, some of whom were patients of Koch. Knowing of Pasteur's germ theory of disease, Koch's first use of his microscope was in trying to find the micro-organism that causes anthrax in sheep. He succeeded in 1876, and that achievement was the beginning of the science of bacteriology.

Koch found that the anthrax bacillus could be stained with aniline dyes, and that it could be cultured on gelatin, a solid medium. He inoculated sheep and rabbits

with cultures of anthrax. He made cultures of *Bacillus anthracis* obtained from the animals he had inoculated and injected them into rabbits, causing anthrax in them. The publication of this work was responsible for Koch's being invited to Berlin, where, with ample laboratory facilities and capable assistants, he continued his studies on bacteria. Using a Zeiss oil immersion lens and an Abbe condenser on his microscope, and with the use of aniline dyes in staining bacteria, Koch discovered the bacillus of tuberculosis in 1882, and the bacillus of cholera in 1884.

Asepsis. Koch's bacteriologic studies provided the basis for developing asepsis in surgery. He and Klebs found streptococci and staphylococci in the pus of infected wounds. Koch and Fehleisen proved that streptococci cause erysipelas. Koch studied the effect of antiseptics on streptococci and staphylococci, and proved that a 1-1000 solution of bichloride of mercury was more effective in destroying them than a five per cent solution of carbolic acid. Koch also proved that the use of boiling water and steam was the best method of sterilizing instruments and gauze before operations.

While Koch and his confreres in Berlin were experimenting with pyogenic bacteria and methods to prevent infection of wounds, a Swiss professor of bacteriology in Zurich, Carl Eberth, discoverer of the *Bacillus typhosus*, made studies of bacteria on the hands. He found streptococci and staphylococci and other micro-organisms on the surface of the skin, beneath finger nails and in hair follicles. Eberth proved that immersion of the hands in solutions of carbolic acid and bichloride of mercury did not sterilize them; but that scrubbing them with soap and a nail brush, and thorough cleansing in running water were more effective.

When Lister's paper on the antiseptic principle in surgery was published in 1866 it started a controversy that lasted for a quarter of a century between Theodor Billroth, professor of surgery in the University of Vienna, then the greatest teaching medical center in Europe; and von Bergmann, professor of surgery in Berlin, which, following the epoch making achievements of Virchow, was the first medical rival of the Austrian capital.

Billroth, working in the *Algemeines Krankenhaus* in Vienna, then the greatest

teaching hospital in the world, combatted Lister's theories with all the fervor of a reactionary fighting to prevent progress. He refused to use Lister's methods; and the mortality records of deaths from septicemia, gangrene and erysipelas remained high in Vienna hospitals. In Germany von Bergmann in Berlin, Thiersch in Leipzig, von Volkmann in Halle, and von Nussbaum in Munich applied Lister's antiseptic methods in the surgical wards of their hospitals, with amazing reductions in the number of deaths from wound infections. Von Bergmann found Lister's methods difficult of application and he determined to develop a technique which would eliminate the use of carbolic solutions. Applying the knowledge learned from the researches of Koch, Klebs and Eberth, von Bergmann and his assistant, Carl Schimmelbusch, developed the aseptic technique in surgery as it is practiced in every well equipped hospital in the world today. The publication of Schimmelbusch's book on "The Aseptic Treatment of Wounds" in 1892 had a profound effect in the transition from antisepsis to asepsis in surgery. It brought surgical asepsis to the United States the same year.

The Advent of Johns Hopkins Medical School. W. S. Halsted, professor of surgery in the recently established Johns Hopkins Medical School, on reading of the technique employed in von Bergmann's clinic in Berlin, had steam sterilizers placed in the operating rooms of the Johns Hopkins Hospital. Halsted, and his associate, Howard A. Kelly, professor of gynecology, abandoned Lister's methods and adopted the von Bergmann aseptic technique in every detail. Three years later, in 1875, Hunter Robb, an associate of Kelly, published a book describing the aseptic technique in use at Johns Hopkins Hospital as adapted from methods employed by von Bergmann and Schimmelbusch. In the same year, Welch published "The Bacteriology of Surgical Infections." These books were factors in popularizing aseptic surgery in the United States.

The use of rubber gloves was an important development in aseptic surgery. When first used at the Johns Hopkins Hospital in 1888, their effect in preventing the transmission of pathogenic bacteria from the surgeon's hands to open wounds was not considered. The late J. M. T. Finney, in his autobiography, "A Surgeon's Life," related an

interesting romance of how rubber gloves were first used in operating rooms. Finney said:

"The story of the development of the use of rubber gloves in surgery is a curious one. In addition to her unusual professional qualifications, the head nurse in the Johns Hopkins Hospital operating room, Miss Caroline Hampton, had for some time attracted the personal interest of Dr. Halsted, who was a bachelor. This mutual attraction had early been observed by the members of the resident staff and the operating room nurses; and, needless to say, the progress of the courtship was watched with interest. About this time Miss Hampton's hands, which had suffered greatly from immersion in the antiseptic fluids, carbolic acid and bichloride of mercury, had reached the point where she could no longer carry on. Dr. Halsted's concern for Miss Hampton was two-fold: an interest in her personal well-being and in having her assistance in carrying out the operating room technique. After trying various experiments to no avail, he finally hit upon the idea of having made for her thin rubber gloves, which would afford the desired protection to the skin of her hands . . .

"One day, in discussing the use of rubber gloves for Miss Hampton, Dr. Bloodgood observed that 'what's sauce for the goose is sauce for the gander.' If rubber gloves were all right for the nurse's hands, why not put them on the surgeon and the other assistants? The idea took, the gloves were made and gradually came into use, first by the nurse, then by the assistants and finally by the operator himself. From that time on rubber gloves have been in constant use not only in the Surgical Clinic of the Johns Hopkins Hospital but in modern, up-to-date hospitals all over the world . . . It is a pleasure to note that the interesting romance, begun in the operating room, yielded a priceless boon to aseptic surgery, and finally culminated in a happy marriage."

Since the complete moral and physical degradation of Germany as a nation, it is not popular to credit the Germans with having accomplished anything good at any time; but the fact remains that the development of scientific medicine and surgery in the last half of the 19th Century was largely the product of German brains and ingenuity. This is said without discredit to Bichat, Pasteur, Lister, and other pioneers in medicine and surgery, who discovered the principles upon which the Germans based their epoch-making studies in pathology and bacteriology. No one can deny that the Germans are largely responsible for making the laboratory a *sine qua non* in the practice of medicine and surgery.

If a student of medical history were asked to name the four physicians who did most to advance the science and practice of medi-

cine and surgery in the last fifteen years of the 19th Century, without hesitation he would list four professors in the Johns Hopkins Medical School—William H. Welch (1850-1934), William S. Halsted (1852-1922), William Osler (1849-1919) and Howard A. Kelly (1858-1944). These four men, after having received the best possible training in medicine in America—Welch at Yale, Halstead at Columbia, Osler at McGill, and Kelly at Pennsylvania—spent several years in postgraduate study in Europe, largely in Germany. Welch and Halsted in New York, Osler and Kelly in Philadelphia, brought to the United States laboratory methods they had learned in Germany. The equipment and supplies for their laboratories were purchased largely in Germany.

In 1886, when William H. Welch was selected by Daniel Gillman, President of Johns Hopkins University, to develop Johns Hopkins Hospital and Johns Hopkins Medical School, he brought Halsted as professor of medicine and Kelly as professor of gynecology. Welch himself became professor of pathology. Halsted was first a pathologist; Osler had been professor of pathology in the University of Pennsylvania; and Kelly had excellent training in pathology. Those four men applied in Baltimore the pathology and bacteriology they had learned in Germany. Each of them made important contributions in their respective fields; and, what is perhaps more important, they published reports of their achievements in many books and hundreds of articles in medical journals.

Welch discovered the bacillus of gas gangrene. Among the publications of Welch, which had a profound influence on medical thought in the United States and Canada, were "General Pathology of Fever," 1888 and "The Biology of Bacterial Infection and Immunity" in 1894.

Halsted's leadership in scientific surgery was established by his introduction of the aseptic technique in surgery, by his using cocaine in nerve blocking, by his operation for hernia and his radical operation for cancer of the breast; and his experimental work in goitre.

Osler did not make important discoveries in medicine, but he was among the first to stress the relationship of pathology and bacteriology to practical medicine. Osler's "Practice of Medicine," first published in

1892, was an important factor in raising medicine from the slough of empiricism, into which it had fallen, to a science. Edith Gettings Reid, one of Osler's best biographers, said of Osler's textbook: "A wonderful book. Indirectly it created the Rockefeller Institute for it caught Mr. Rockefeller (Jr.) by its lucidity." Cushing said: "It (Osler's 'Practice of Medicine') contributed to the incalculable benefit of humanity which the General Education Board has rendered with Mr. Rockefeller's money, owing to its interest in the prevention and cure of disease. Indeed the present position of his colleague, Welch, as Director of the Institute of Hygiene is remotely due to the fact Osler set himself thirty years before to write a textbook of medicine."

Sir William Osler, later regius professor of medicine at Oxford, did more to popularize medical science in English speaking countries than any man who has lived.

Kelly developed scientific gynecology far beyond the stage that Sims left it when he died in 1883, and advanced it further than Sims' proteges, Emmett, Gaillard Thomas, and others had done. Kelly made Johns Hopkins, and his own private hospital in Baltimore, the Mecca—as the Woman's Hospital in New York had been—to which surgeons, interested in the surgery of women, flocked to learn the best of everything in gynecology. Kelly devised many new instruments, including those for cystoscopy and the diagnosis and treatment of disorders of the ureters and pelvis of the kidney. Kelly's books, illustrated by Max Broedel, whom he brought from Germany to Johns Hopkins—"Operative Gynecology" in 1898, "Medical Gynecology" in 1912, and "Gynecology" in 1928—are the greatest contributions to the literature on scientific gynecology that have been published.

At the end of the 19th Century, "the big four," Welch, Halsted, Osler and Kelly, were without peers as champions of scientific medicine and surgery; and the Johns Hopkins Medical School had assumed the leadership in medical education in the United States. Baltimore, however, was not the only city in which great progress was made in the advancement of all branches of medicine. Early in the 20th Century, the faculties of Harvard, Yale, Columbia, Cornell, Pennsylvania, Michigan, Washington (in St. Louis) and other then leading med-

ical schools adopted German methods of asepsis and developed their laboratories until they were as good, or better, than those at Johns Hopkins. A great medical center, the Mayo Clinic, was developed in a small town in Minnesota. Rochester, Minnesota became a medical center for ambitious surgeons who desired to learn the latest methods in surgery and medicine.

Germany lost her leadership in medicine when she followed the *ignis fatuus* of world domination in World War I; and, as far as the science of medicine is concerned, she was made totally bankrupt by the Hitler dynasty. The United States is far in the lead of any, and all, other nations in scientific medicine and surgery in the middle of the 20th Century.

We are living in the Golden Age of medicine, made possible by the vision and courage of pioneers in the last half of the 19th Century. Miracles after miracles have been wrought by many scientists in many research laboratories in the last four and a half decades. The science of nutrition, including the discovery of vitamins, developed largely in the United States, is of far-reaching import in the upbuilding of mankind. Public hygiene, beginning with the sanitation of Cuba and the Panama Canal Zone from 1900 to 1910 by William Crawford Gorgas (1854-1920), and extended by the development of state departments of health, with health units in many cities and counties of our Nation, is eradicating the contagious and communicable diseases from the confines of the United States. American methods of public health administration are being adopted by other nations, particularly in Central and South America, to the betterment of many million people. The saving of human lives is of greater importance than curing the sick, and that American viewpoint is being accepted by all nations.

Among the most important of the miracles of the 20th Century are the insulin treatment of diabetes, discovered by Banting and Best at the University of Toronto in 1921; liver therapy in pernicious anemia and avitaminosis by Minot and Murphy at Harvard University in 1926; the sulfa drugs (chemotherapy), partly of German origin but developed largely in the United States, in the treatment of pneumonia, meningitis, septicemia, and many other infections; and

penicillin, which not only is displacing the sulfa drugs in dramatic cures of pneumonia, meningitis, septicemia and all pyogenic infections but is curing syphilis and gonorrhea in an incredibly short time. The discovery of penicillin should be credited to Sir Alexander Fleming of Oxford University, England; but methods for the manufacture and distribution of penicillin on a large scale were worked out largely in laboratories in Canada and the United States. Miracles in abdominal surgery, neuro-surgery, chest surgery, bone and joint surgery, gynecology and other surgical specialties are being performed in thousands of operating rooms all over the world because Pasteur, Lister, Koch and von Bergmann discovered and applied the principle of antisepsis and asepsis in the last half of the 19th Century. Verily, it is a glorious privilege to live and to practice scientific medicine and surgery in this Golden Age.

Decentralization in Medicine. About November 15, 1918, at a small dinner party in Paris, Colonel George Crile, a great American surgeon, who served with distinction in the American Expeditionary Forces in France, was asked what influence on medical and surgical practice would follow American participation in World War I? He said to an associate by his side, Brigadier-General J. M. T. Finney, Chief of Surgical Consultants: "Finney, I have seen in many operating rooms in Army hospitals in France many surgeons whose names I did not know, from towns in the United States that I had never before heard of, doing as good surgery as you and I are capable of doing. Those men have learned the advantages of group practice and when they return home they will establish hospitals and small clinics to care for medical and surgical cases in their communities. We shall see the decentralization of medicine follow this War."

That Crile was a prophet has been proved by the fact that in the last twenty-five years small hospitals and clinics have been established in a large proportion of towns of over a thousand population in the United States. In many of those hospitals aseptic surgery and scientific medicine are practiced by capable surgeons and clinicians. While the great medical centers are thriving, so are the small hospitals. It is a significant fact that in the year 1945, there are few out-

standing surgeons and medical clinicians; but the average of efficiency in medical practice has been raised, until there is little reason for average medical and surgical patients to leave their home communities for treatment. There will always be difficult cases requiring the service of specialists, with large experience in their respective fields, but the decentralization of medicine will continue. It certainly is true that the citizens of the United States are being cared for when they are sick better and more efficiently than ever before in our history; and in no other country in the world have such advances been made in scientific medicine and surgery.

The altruism of the medical profession has been proved by the fact that American physicians—I believe without exception—have participated in every movement directed toward the prevention of disease. All that has been accomplished in the prevention and cure of disease has been due to the initiative and devotion to duty of individual physicians who have been unhampered by government direction. The movement on foot by socialistic theorists, labor unions and vote seeking politicians to regiment physicians into state medicine, if successful, will lower the standards of medical practice, give cheap and inefficient service to

the sick, and stifle progress in the science of medicine and surgery.

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UNDERLYING CAUSES OF ALABAMA'S HEALTH PROBLEMS

M. S. DAVIE, M. D.
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I heard Dr. William Mayo say something in his operating room one morning before the teens of this century which I have never forgotten. He said, "You can't blink facts and you can't go back of the returns." Plato himself never made a wiser observation. It makes one think of a line which the sage of Monticello put in our Declaration of Independence. He said, "We hold these truths to be self-evident." And yet, in the third of a century since I heard Dr. Mayo say this thing about the Kraske operation, I have seen every day where someone has "blinked facts." And the intelligence level does not seem to make much difference: whether it

is proletarian or pundit. I have come to believe that William James had the answer when he said that "facts are there only for those who have a mental affinity with them."

The underlying causes of Alabama's health problems are two-fold, both general and special, and each of these subdivided into tangibles and intangibles. I shall give you examples in these divisions, without taking time to differentiate or classify.

Lincoln thrashed the South back into the Union and made it possible for us to develop the greatest nation in the world; but there followed a double complex and a saga of man's inhumanity to man. A superiority complex in the North, an inferiority com-

Read before the Allied Health Council of Alabama, Birmingham, November 27, 1945.

plex in the South, and a series of inadequacies in the science of conduct producing chaos and social pathology in the South of disastrous repercussions—establishing a quartette that always stalks four abreast: poverty, sloth, ignorance and disease.

Health is a question of education and economic thrift. Education is the basis of economic thrift. Get the percentage rating of your state in education and you can more or less accurately estimate your per capita income.

Despite these handicaps, the momentum of which we are contending with today, Alabama has developed the model public health system of the world. This is due to the fact that our first four health officers were outstanding statesmen and passionately devoted to their task. They were Cochran, Sanders, Welch and Baker.

Three of the underlying causes of Alabama's health problems are hookworm, pellagra and malaria. We have suffered more in the literature than in fact from these things. Literature without prejudice is impossible, of course, but much of this has been the prejudice of unkindness. We still have a good deal of hookworm, the malnutrition known as pellagra is seldom seen, and malaria is passing out of the picture.

Alabama medicine is in a more serious condition today than it has ever been before. The tragedy of the situation is the inertia, unalertness, indifference and ignorance of the physicians of the state as to what has happened, is happening and is scheduled to happen to our profession in this state. I would like to quote you a sentence from a letter I received from the ablest psychiatrist I know: "General restlessness or unrest and dissatisfaction of the population of the world, which might be pronounced 'Prevailing Psychotic Trend' in which all people are displeased and resentful of the present order, everybody demanding radical and revolutionary changes, everybody presuming to attend to everyone's business except his own."

This is true of the nation, but in our state we have had a breakdown in our public health system which has given the general public all the incentive it could have needed to ask for socialized medicine. The excellence of our public health system was our best defense against the anarchists and our

best plea for the continuance of competitive medicine, initiative, liberty in selecting, developing and practicing the specialty of our choice, and all the dignities of conduct which embellish a democracy.

Some of you know that there has been a progressive effort to establish international socialism for twenty-five or thirty years. There have been recurrent and sporadic efforts in this field since 1899, but definite official status was achieved in 1919. Since that time this movement has evolved into the International Labor Organization, the most potent factor in shaping public opinion and fashioning legislation we have ever had in this country. This organization was officially launched in this nation by Franklin Roosevelt when he was Under Secretary of the Navy, and when he was concluding his campaign for the fourth term in the White House and any of his managers struck something they could not handle, he told them to "clear it through Sidney."

One of the prime objectives of the International Labor Organization is socialized medicine. There can be little doubt that this organization wrote the Wagner-Murray-Dingell Bill or that it has written practically all the legislation in this nation seeking to establish socialized medicine. No one would be more surprised than the authors of much of this legislation, at this statement. There are many subtleties back of a great deal of our legislation. And, again, some of you have heard me say that I have long wanted to write a text-book and title it "The Invisibility of the Obvious."

Now Alabama Medicine can only save itself from this unmistakable impending debacle by fully recognizing the situation and immediately engaging in the most militantly integrated teamwork for clearly defined objectives.

Behavior Problems in Children—A good deal of ignorance is displayed by the laity as to what constitutes love and affection for their children. It is not an unusual notion that a child is spoiled by being loved too much. Usually this means too much hugging, kissing, holding and rocking. Many children dislike this show of affection made by parents who fundamentally hold their children in a good deal of contempt and even reject them. The term "ambivalence," which is applied to this type of behavior is a good one. It is the basis on which children are spoiled. I have yet to see the child who was spoiled by too much real love.—*Miller, J. Florida M. A., Nov. '45.*

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PRIMARY ATYPICAL PNEUMONIA

"During the past few years much has been written concerning non-bacterial pneumonia. This type of pneumonia has been and still is called by various names. Acute diffuse bronchiolitis, acute interstitial pneumonitis, primary atypical pneumonia, acute pneumonitis, bronchopneumonia, influenzal pneumonitis, disseminated focal pneumonia and benign bronchopulmonary inflammation are designations that have been used."

"Previous reports of primary atypical pneumonia have been issued, almost without exception, from Army hospitals, colleges and health departments, in all instances where roentgen-ray facilities were available, usually at no cost to the patient, and the chest film was obtained as a part of the routine examination. This point is stressed, as it is our opinion that the infection is present in many cases which remain undiagnosed unless roentgen-ray facilities are available and used frequently."

Thus do Karpel, Waggoner and McCown¹ begin their inquiry into this new and troublesome entity. The authors state that

1. Karpel, Saul, Captain, M. C., A. U. S.; Waggoner, Irving M., Lt. Col., M. C., A. U. S., and McCown, Oswald S., Jr., Captain, M. C., A. U. S.: Primary Atypical Pneumonia: A Critical Analysis of 500 Cases, *Ann. Int. Med.*: 408 (March) 1945.

700 cases of primary atypical pneumonia were diagnosed out of 7,000 admissions to the medical service of the Station Hospital, New Orleans Port of Embarkation. "The cause of the disease has not been definitely established."

The onset of the disease is apt to be insidious and the patient feels that he is developing a common cold and may not seek medical advice. Malaise, chilliness, headaches, rhinitis, sore throat and cough usually occur, accompanied by substernal pain or heaviness. The authors report that in about 10 per cent of cases the pain is classified as pleural. "In a lesser number of cases the onset is acute with the aforementioned symptoms developing in a period of 24 hours or less. In an even smaller number the infection is ushered in with a shaking chill and quickly developing prostration. In the average case the cough was severe and productive in most cases of a tenacious mucoid sputum."

The temperature usually ranged from 102 to 104 degrees. The authors tell us that "approximately 10 per cent of our series presented no abnormal physical findings." And also that "the physical findings were bizarre in many instances." Laboratory findings were not remarkable except that 18.4 per cent of the cases revealed increased eosinophilic cells.

There is no specific treatment. "We are thoroughly convinced of the complete ineffectiveness of the sulfonamides in this infection. We have repeatedly observed progression of the pneumonic process in the presence of therapeutic blood levels of the drug."

The mortality was 0.2 per cent. "It is evident, therefore, that the prognosis is excellent. The low incidence of complications, excepting the cases of bronchiectasis, and the fact that none required surgery but instead cleared spontaneously, indicates that complete recovery is the rule."

The investigators found bronchiectasis to be present in almost 2 per cent of the cases. "We have been unable to determine whether the bronchiectasis preceded the pneumonic process or not. We have a strong suspicion that an acute bronchiectasis may develop with the infection."

The Army observers have made a thorough study of a disease which is difficult to

diagnose and which is apparently on the increase. Their report should give much aid and comfort to practitioners who must recognize and treat primary atypical pneumonia. The authors are indeed upon firm ground when they insist upon the frequent

use of the x-ray. And everyone will agree with their concluding sentence: "Further studies of this disease, especially efforts to determine the causative agents, are urgently needed."

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

B. F. Austin, M. D.
State Health Officer

HOSPITAL CARE

"In no other act," said the famous Roman orator Cicero, "does man approach so near the gods as when he is restoring the sick to the blessings of health."

For centuries the men and women of medicine have been doing just that: "restoring the sick to the blessings of health." In that great work they have had the help of institutions of healing, crude and none too sanitary in the cradle days of their existence but models of cleanliness and professional efficiency in our time. The medical profession and the hospitals have worked hand in glove to give the American people a type of medical care that has set an example for the rest of the world. It would be impossible to estimate how many millions of lives are being saved every year by the teamwork of these two. It would be equally impossible to say how the credit should be divided between them for this great achievement.

But, like other valuable things, first class medical care is expensive. Those who make it possible have to be expensively educated and equipped with costly tools with which to work. This is particularly true of hospital care, for several reasons. For one thing, a person who goes to a hospital is usually in a more serious condition than one who merely visits a physician's office or has him make a call at the patient's home. For another thing, a person who has to go to a hospital must devote all his time to the business of trying to get well. Unlike the person who is treated by a physician in the physician's office or at home, he cannot attend to his regular work, which means in many cases that hospitalized illness means an end of income until the illness is over, or at least until convalescence

is well under way. And finally the services of specialists, use of operating rooms, laboratory services and the many other services which the hospital patient requires (not because he is in a hospital but because he is sick enough to be hospitalized) cost considerable amounts to provide.

Various expedients have been resorted to in order to reduce the financial burden of hospital care. Hospitals have received generous treatment in the way of taxation, and indeed few of them are required to pay regular property taxes, in order that this saving may be translated into lower operating costs and reduced charges. Many are endowed by religious groups. Hospitals have been the beneficiaries of many wills and have benefited greatly from gifts from the wealthy, who were eager to put their surplus wealth to good use. Physicians often serve without charge as members of hospital boards and treat indigent cases at less than their normal fees or entirely free. Still other concessions of one kind and another are made to keep the cost of hospital care as low as possible.

In spite of all of them, however, hospital care is still expensive for the person of small or moderate means, especially when illness means an end of all income. In order, first, to prevent a person in moderate circumstances from depriving himself or his family of needed hospital care because of the expense; second, to prevent him from having to worry about a hospital bill long after leaving the hospital; and, third, to protect the hospital against heavy loss due to inability to pay hospital bills (which naturally adds to the cost of those who do pay), various prepayment plans for hospital care have been developed and put into effect in various parts of the country. While they differ in details, their principles and main objectives are essentially the same. All of them provide for small regular payments

which entitle the payer and, in some cases, his family to a specified number of days of treatment in the hospital of his choice, provided of course it is one of those participating in the plan.

In this State the plan has been operated by the Hospital Service Corporation of Alabama, which was granted a charter by the State as a non-profit corporation. The need for such a service had become apparent to the members of the Medical Association of the State of Alabama, who took the lead in the formation of the Corporation. Since the plan has been in operation here, the friendliest cooperation has existed between the State's physicians and those charged with its administration. In view of its status as a non-profit public service agency, the Corporation has been relieved of all taxes, in order that those participating in the plan might get as much hospital care as possible for their money.

As successful as the plan has been, there has been a growing belief among medical men and the general public that it did not go far enough, that some form of prepayment should be put into effect which would relieve the participant of doctor's bills and bills for other types of service often required while in the hospital but not provided for in the plan already in effect. This resulted in the appointment by the President of the State Medical Association, Dr. Walter Scott, of a Postwar Planning Commission, which was instructed to make a careful study of other states' plans providing prepaid medical, obstetric and surgical care for hospital patients and to make recommendations to the State Board of Censors regarding a similar plan for this State. This was done on March 7 of this year, and, at the Commission's request, the State Board of Censors petitioned the Hospital Service Corporation to arrange to furnish, on a prepayment basis, medical, surgical and obstetric service to hospital patients. This petition met a ready response, and the necessary changes were made in the law governing the operation of the Corporation so as to permit it to assume those added responsibilities. The most important of these changes involved the enlargement of the Corporation's Board of Trustees to include six members of the State Medical Association, to be nominated by the State Board of

Censors. Three of the six have been made members of the Corporation's Executive Committee.

The Alabama plan, now in operation, is modeled after the plan in operation in Delaware. It does not set the fee that may be charged by a physician or surgeon, nor does it promise to pay any fee which he may charge. It merely provides that a physician or surgeon treating a hospital patient insured under this plan will receive payment from the Hospital Service Corporation of Alabama up to a certain amount for each type of service performed. The difference between that amount and the fee actually charged for such service, if any, is to be paid by the patient. In most cases the amounts payable under the plan are equivalent to those charged by the physician or surgeon, leaving nothing to be paid by the policy holder.

Persons wishing to avail themselves of this extended protection pay extra for it, just as a person pays extra for a clause in his life insurance policy carrying total disability benefits or suspension of premium payments under certain circumstances. The new plan does not interfere in any way with the operation of the old one, and those who consider the protection provided under that earlier plan to be adequate for their needs may continue to receive that protection at the rate prevailing when they took out their policies.

The plan formerly in effect provided a private room or ward service, depending upon the amount paid for the policy; routine nursing service, meals, routine laboratory tests including white and red blood cell count and urinalysis; routine medicines, including sulfa drugs, except those administered intravenously, hypodermics, necessary dressings, use of operating room, and supplies needed for administering anesthesia, such as ether or gas. Thus, in general, the benefits provided under the original plan include hospital costs but not the cost of medical care while in the hospital. The new plan was conceived with a view to providing this latter type of care, as well as the other, on a prepaid basis.

Under the new, somewhat more expensive but greatly expanded plan, a person entitled to its benefits receives two dollars a day for a doctor's visit while he is in the

hospital, with a limit of 25 such visits for any one contract year. Surgeons' fees range from five dollars to \$150. Maximum payment for all surgical operations is limited to \$200 in any contract year for the subscriber or for each dependent covered by his hospital insurance policy. Maternity care is provided on one type of contract but is available only after the special rider providing it has been in effect at least 12 months. This rider, involving extra cost, provides maternity expenses up to \$50 during any one year for ordinary delivery and \$100 for cesarean section. There are also allowances for special services rendered to bed patients during any one contract year. These must not exceed \$15 each for administering anesthesia, for electrocardiograms and for diagnostic x-ray service, \$10 each for radioactive treatment, physiotherapy, allergy tests and special laboratory service, and \$5 each for basal metabolism (alone). The allowance for electrocardiograms is on the basis of not more than \$5 each (with a limit of three) during any single contract year. It should be emphasized that, except for operations performed in physicians' offices or clinics, all of these services must be performed while patients are in hospitals. Whenever a subscriber becomes sick or meets with an accident while outside the State or while in an Alabama community in which there is no hospital participating in the plan, the Hospital Service Corporation will pay up to \$6.50 per day for private room service and up to \$4.50 a day for ward service in the hospital to which the victim of the injury or illness is taken, depending upon the type of service to which his policy entitles him. He is also entitled of course to the usual allowance for medical and surgical treatment, just as though this treatment were received in one of the 61 Alabama hospitals participating in the plan. In pregnancy cases the hospital allowance is increased 50 cents a day for both ward and private room service.

The cost of this newly extended protection depends of course upon whether the patient is entitled to a private room or only to a bed on a ward. For private room care, the charge is \$1.65 a month for an individual (non-maternity); \$3.30 a month for husband and wife (non-maternity); \$2.55 a month for a husband or wife and all children under 16 years of age (non-maternity); and \$4.20

a month for husband and wife and all children under 16 years of age (including maternity.) For ward service the rates are somewhat lower.

The State Department of Health heartily indorses this method of providing hospital, medical and surgical care to the people of Alabama. Those who may wish more complete information regarding prepaid hospital care should write to the Hospital Service Corporation of Alabama, 2119 First Avenue, North, Birmingham, Alabama.

BUREAU OF SANITATION

T. H. Milford, M. S. in S. E., Director

EFFICACY CLAIMS FOR INSECTICIDES CONTAINING DDT

A release by Mr. W. G. Reed, Chief, Insecticide Division, Livestock Branch, United States Department of Agriculture, entitled "Labeling Insecticides Containing DDT" contains information of interest to the general public, particularly that part covering efficacy claims, which is quoted below:

"The term 'DDT' refers to the compound 2, 2-bis (parachlorophenyl)-1, 1, 1-trichloroethane, including both the technical grade of this material, minimum setting point 88° C. and the purified grade. Technical DDT, which is the form of this chemical used for most insecticidal purposes except aerosols, consists primarily of 2, 2-bis (parachlorophenyl)-1,1,1-trichloroethane, together with impurities, including considerable amounts of isomers and much smaller amounts of other by-products formed in its manufacture.

"When DDT is used as an insecticide, it is mixed or compounded with other materials to make it suitable for application. The forms commonly used are solutions in kerosene, deodorized kerosene, or other mineral oil, to which other insecticides may be added; emulsifiable materials consisting of DDT in an oil solvent, together with an emulsifier, so that emulsions will be formed when they are mixed with water; powders (which may be used as dusts, sprays, or paints) consisting of DDT in an inert carrier, such as pyrophyllite, talc or clay, and the so-called aerosols, consisting of a propellant such as Freon, DDT, and possibly other insecticides.

"Insecticides containing DDT are known to be effective against a wide variety of insects but they are not effective against all insects and they are different in their action from some of the common household insecticides. Their labels should clearly state the purposes for which they are intended and give clear and adequate directions for use. When necessary, the dosages should be definitely specified. Since different household insects have different habits, the same directions will not be suitable for all uses. The following paragraphs indicate types of directions which will be acceptable:

"Flies, Mosquitoes, and Gnats.—As little as 1% of DDT in kerosene is eventually effective as a spray for these insects but it is very slow in action. Because of this sluggish action, products consisting of DDT in kerosene cannot be classified as to grade by the Poet-Grady method. Some other toxicant must be added if quick knockdown is desired. The directions for use should provide for closing all doors and windows and thoroughly spraying the product in all parts of the room, particularly toward the ceiling so as to fill the room with a fine mist. The room should be left closed for 10 or 15 minutes after spraying. No claims for lasting or residual effects should be made for such a treatment.

"Insecticides containing DDT can also be used for residual effect. A dosage of 200 milligrams of DDT per square foot will give residual effect up to 3 or 4 months unless removed by weathering, washing, or other means. To obtain such a deposit without runoff, it is usually considered necessary to apply a 5% concentration in oil or water. The directions should provide for thoroughly treating screens, walls, painted woodwork, light fixtures, and other places where the insects may alight. For flies and other insects attracted to light, it is most important to cover the spaces toward the light. Since some kinds of mosquitoes seek dark places, directions should provide for treating these hiding places. Screens are subject to weathering and, therefore, directions should provide for re-treating them at frequent intervals.

"Bedbugs.—Sufficient DDT in the form of an oil solution, as a dust, or in an emulsion will be effective as a contact or as a residual poison for bedbugs. The directions should

provide for thoroughly treating bedsteads and mattresses, paying particular attention to all hiding places. If a good treatment is given and the residue is left in place, it may be effective for as long as six months.

"Fleas Infesting Premises.—Dusts and oil sprays containing DDT in suitable amounts have been found effective against fleas. Directions should provide for thoroughly spraying or dusting floors, rugs, and other flea-infested places. Under ordinary conditions where the residue is not removed, residual action for several weeks may be expected.

"Ants in Buildings.—Oil solutions containing DDT should be sprayed so as to hit as many of the ants as possible and to thoroughly wet their runways and the other places which they frequent. Such treatment should give a residual effect for periods up to several weeks.

"Dusts containing DDT have shown value against certain species of ants. They should be recommended for use so as to hit as many ants as possible and to cover their runways and the places they frequent. If a dust is not effective against all sorts of ants infesting households, this should be made clear.

"Roaches.—Not less than 8% of DDT in a dust, 5% in an oil solution, or 3% in a water spray should be recommended for these insects. The German roach or waterbug is especially difficult to control with insecticides containing DDT. Instructions should provide for treating cracks and crevices in woodwork, dark places behind pipes, and all places which roaches infest, hitting as many insects as possible. A thorough treatment may give protection for several weeks but in view of the difficulty in controlling these insects, instructions should be given for repeating the treatment whenever reinfestation occurs.

"Ticks in Premises (the brown dog tick which is not known to carry disease). This tick hides in cracks or crevices of kennels or houses, and directions for use against it should be similar to those for use against roaches. Since the engorged tick is quite resistant, a second treatment may be necessary.

"Clothes Moths and Carpet Beetles.—The oil sprays containing DDT will kill clothes moths and carpet beetle larvae by contact. Directions for this use should provide for

thoroughly spraying the articles to be protected, paying particular attention to folds and seams, as well as spraying the containers in which they are packed. If any are not in tight containers, the treatments should be repeated at monthly intervals.

"DDT is also known to have mothproofing properties—that is, residues remaining in the fabric will give lasting effect. Any directions for such use should provide for a thorough contact with the fibers of the articles to be protected. If the DDT will be removed by dry cleaning, by washing, or by other agents, instructions should be included to repeat the treatment after such dry cleaning, washing, or other exposure."

BUREAU OF LABORATORIES

Samuel R. Damon, Ph. D., Director

SPECIMENS EXAMINED

JULY 1945

Examinations for diphtheria bacilli and Vincent's	325
Agglutination tests (typhoid, Brill's, undulant fever)	1,000
Typhoid cultures (blood, feces, and urine)	1,186
Examinations for malaria	1,400
Examinations for intestinal parasites	1,694
Serologic tests for syphilis (blood and spinal fluid)	46,665
Darkfield examinations	48
Examinations for gonococci	3,417
Examinations for tubercle bacilli	1,355
Examinations for meningococci	4
Examinations for Negri bodies (microscopic)	131
Water examinations	1,432
Milk examinations	2,036
Miscellaneous	454
	61,147
Jefferson County Blood Test Survey	10,730
Total	71,877

AUGUST 1945

Examinations for diphtheria bacilli and Vincent's	592
Agglutination tests (typhoid, Brill's, undulant fever)	1,219
Typhoid cultures (blood, feces, and urine)	1,354
Examinations for malaria	1,298
Examinations for intestinal parasites	2,123
Serologic tests for syphilis (blood and spinal fluid)	28,395
Darkfield examinations	33
Examinations for gonococci	3,407
Examinations for tubercle bacilli	1,652
Examinations for Negri bodies (microscopic)	120
Examinations for meningococci	1

Water examinations	1,224
Milk examinations	1,964
Miscellaneous	488
Total	43,870

SEPTEMBER 1945

Examinations for diphtheria bacilli and Vincent's	1,108
Agglutination tests (typhoid, Brill's, undulant fever)	1,001
Typhoid cultures (blood, feces, and urine)	1,002
Examinations for malaria	1,010
Examinations for intestinal parasites	1,660
Serologic tests for syphilis (blood and spinal fluid)	24,905
Darkfield examinations	32
Examinations for gonococci	3,141
Examinations for tubercle bacilli	1,456
Examinations for Negri bodies (microscopic)	113
Examinations for meningococci	1
Water examinations	1,197
Milk examinations	2,172
Miscellaneous	515
Total	39,313

BUREAU OF PREVENTABLE DISEASES

D. G. Gill, M. D., Director

CURRENT MORBIDITY STATISTICS

	1945 Aug.	Sept.	Sept. E. E.*
Typhoid	13	21	47
Typhus	98	108	59
Malaria	468	515	1011
Smallpox	0	0	0
Measles	4	6	28
Scarlet fever	50	75	78
Whooping cough	88	40	66
Diphtheria	47	122	115
Influenza	123	70	65
Mumps	36	40	23
Polionmyelitis	24	21	15
Encephalitis	1	1	2
Chickenpox	5	6	4
Tetanus	6	7	5
Tuberculosis	344	291	222
Pellagra	2	1	15
Meningitis	7	8	6
Pneumonia	140	144	95
Syphilis	912	1177	1426
Chancroid	7	12	13
Gonorrhea	820	1146	425
Ophthalmia	0	0	1
Trachoma	0	0	0
Tularemia	1	0	0
Undulant fever	15	7	8
Dengue	0	0	0
Amebic dysentery	8	15	0
Cancer	189	275	0
Rabies—Human cases	0	0	0
Positive animal heads	58	60	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

ANNUAL MEETING
OF THE
ASSOCIATION
BIRMINGHAM
APRIL 16-18, 1946

BUREAU OF VITAL STATISTICS

Miss Ethel R. Hawley, Acting Director

PROVISIONAL MORTALITY STATISTICS

REPORTED BIRTHS, STILLBIRTHS, DEATHS FROM
CERTAIN IMPORTANT CAUSES AND RATES*—

AUGUST 1945, 1944, 1943

Births, Stillbirths, and Causes of Death	Number of Deaths Registered— August 1945			Rate (Annual Basis)		
	Total	White	Colored	1945	1944	1943
Births, exclusive of stillbirths	5989			24.4	26.5	29.6
Stillbirths	170			27.6	26.2	23.2
Deaths, exclusive of stillbirths	2021	1192	829	8.2	7.5	8.2
Infant deaths, under one year	264	136	128	44.1	39.2	42.5
Under one month	162	87	75	27.0	23.2	27.3
Typhoid and paratyphoid 1, 2	1		1	0.4	1.2	0.8
Epidemic cerebrospinal meningitis 6	3	1	2	1.2	1.2	1.2
Scarlet fever 8						
Whooping cough 9	11	5	6	4.5	2.8	3.2
Diphtheria 10	5	4	1	2.0	1.2	0.3
Tuberculosis, all forms 13-22	87	31	56	35.4	44.9	37.8
Malaria 28	2		2	0.8	2.4	3.7
Syphilis 30	20	3	17	8.1	10.6	10.6
Influenza 33	6	2	4	2.4	2.8	7.3
Measles 35					0.4	
Poliomyelitis 36	6	2	4	2.4	0.8	1.2
Encephalitis 37						
Typhus fever 39	7	7		2.8	1.2	0.8
Cancer, all forms 45-55	193	144	49	78.5	67.7	58.2
Diabetes mellitus 61	26	18	8	10.6	9.0	8.5
Pellagra 69	9	7	2	3.7	0.8	3.7
Alcoholism 77	3	1	2	1.2	0.4	1.6
Intracranial lesions 83	192	112	80	78.1	66.1	65.5
Diseases of the heart 90-95	418	284	134	170.1	139.1	150.0
Diseases of the arteries 96-99	29	22	7	11.8	7.3	6.5
Bronchitis 106	5	3	2	2.0	0.8	1.6
Pneumonia, all forms 107-109	59	35	24	24.0	23.7	35.8
Diarrhea and enteritis (under 2) 119	42	24	18	17.1	21.2	15.5
Diarrhea and enteritis (2 and over) 120	7	2	5	2.8	3.3	2.8
Appendicitis 121	13	8	5	5.3	6.1	6.0
Hernia, intestinal obstruction 122	16	9	7	6.5	6.1	9.4
Cirrhosis of the liver 124	5	4	1	2.0	4.1	4.1
Nephritis, all forms 130-132	141	75	66	57.4	53.8	53.2
Diseases of the puerperal state 140-150	29	14	15	47.1	28.5	33.3
Puerperal septicemia 140, 142a, 147	9	4	5	14.6	6.0	9.3
Suicide 163-164	12	10	2	4.9	3.3	5.3
Homicide 165-168	34	11	23	13.8	8.2	16.7
Accidental deaths (exclusive of motor vehicle) 169, 171-195	100	67	33	40.7	47.3	57.4
Motor vehicle 170	55	34	21	22.4	17.5	13.8
All other causes	364	216	148	148.1	119.9	153.0
Ill-defined and unknown causes 199-200	121	37	84	49.2	63.2	71.2

**Not available.

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific cause per 100,000 population; from puerperal causes per 10,000 total births.

Typhus Control—The story of endemic typhus fever begins in 1898, at which time Dr. Nathan Brill of New York City studied a series of cases of a disease prevalent among immigrants, which resembled typhoid fever and was being erroneously diagnosed as typhoid and paratyphoid. Brill succeeded in differentiating this disease from typhoid and observed that it resembled the European (epidemic) typhus fever. However, there were certain striking differences between this disease and the epidemic typhus of Europe. Brill's disease ran a much milder course, the seasonal distribution was different, and the outbreaks were sporadic. Brill's cases had the following symptoms: high fever, severe headaches, prostration, and the characteristic red macular rash. Epidemic typhus is more prevalent in winter, while the peak incidence of Brill's disease occurs in the summer. Furthermore, epidemic typhus carried a mortality up to 70 per cent, while that from Brill's was only about 2 per cent.

At the time Brill was making his observations in New York City, Anderson and Goldberger of the U. S. Public Health Service were sent to Mexico to study "tabardillo," or Mexican typhus fever. Goldberger, himself, contracted Mexican typhus fever, but studies were resumed in the fall of 1911. These workers observed the marked clinical resemblance between the Mexican tabardillo and Brill's disease. They found that an attack of Brill's disease conferred an immunity to subsequent infection with Mexican typhus, and concluded that Brill's disease was identical with the typhus fever, or tabardillo, of Mexico.

In 1926 Dr. Kenneth Maxcy of the U. S. Public Health Service toured Georgia and Alabama, investigating the numerous cases of typhus reported. He observed that all the cases followed the same pattern; that is, fever up to 105 F., prostration, rash, fatigue, and a very low death rate. He also noted that this disease was not the disease of the poor and oppressed as it was in Europe; cases were found among the upper strata of society, and included lawyers, bankers and merchants. He was led to believe that the body louse was not the exclusive vector.

During the course of a small typhus outbreak in Baltimore, Dr. R. E. Dyer of the U. S. Public Health Service investigated the possibility of the rat flea as a vector of the disease. He combed rats obtained from a drug store in an epidemic area and identified the flea as *Xenopsylla cheopis*. He then chloroformed the fleas, ground them up, and injected the flea debris into a guinea pig. A few days later, the pig came down with so-called Brill's disease. Incidentally, Dyer, himself, contracted the disease. These experiments incriminated the rat flea as the vector. It soon became evident that endemic typhus was primarily a disease of rats, and, secondarily, a disease of man.—*Musacchio, Texas State J. Med., Nov. '45.*



What's the other thing we ought to do this Christmas?

FOR the last four years, the Christmas phrase "Peace on earth, good will to man" has had a pretty hollow, bitter ring.

This year, it won't.

And surely, one thing each of us will want to do this Christmas is to give thanks that peace has finally come to us—both peace—and victory.

One other thing we ought to do:

In our giving, this year, let's choose—first—the kind of gift that helped to bring us peace and victory and will now help us to enjoy them.

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Victory Bonds take care of the men who

fought for us—provide money to heal them, to give them a fresh start in the country they saved.

Victory Bonds help to insure a sound, prosperous country for us all to live and work in.

Victory Bonds mean protection in emergencies—and extra cash for things we want to do ten years from now.

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ALABAMA STATE MEDICAL JOURNAL

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Literature and Sample on Request

Miscellany

PATIENTS WITH PEPTIC ULCERS ARE UNFIT FOR ARMED FORCES

Two Navy doctors reported a study in the November 24 issue of The Journal of the American Medical Association in which they said that persons with a history of peptic stomach ulcers had no place in the armed forces.

A series of 82 Marine and Navy personnel patients with peptic ulcer were studied in a naval hospital by Captain John Russell Twiss (MC), U.S.N.R., and Commander Eugene V. Parsonnet (MC), U.S.N.R., between Nov. 1, 1944 and Mar. 28, 1945. Although usually patients with this condition have been discharged from service, the authors have concerned themselves with the thought that "peptic ulcer constitutes an important problem in the armed forces because experience in all military services has shown that in general patients with this condition are unfit for service and that a large proportion of these patients had the condition prior to enlistment." In the opinion of the authors "no patient with a histo-

ry or findings of peptic ulcer should be admitted to the armed forces. Early separation from service is recommended in all cases."

The authors stated that the "civilian can frequently accommodate himself to circumstances of his own making indefinitely but may quickly break down in service."

Certain symptoms aid in the detection of the disease. According to the doctors the "most reliable diagnostic criteria are considered a history of pain, particularly related to meals, evidence of hemorrhage and positive x-ray findings of ulcer."

Although the patients under observation varied widely in age and physical makeup the authors found something common to the group. "The individuals coming under our observation have varied in age between 18 and 46," the doctors wrote. "They have been white and black, tall and short, fat and thin, nervous and phlegmatic. There is no common physical habitus, but the one common denominator is an unstable or maladjusted psychogenic and physiologic background."

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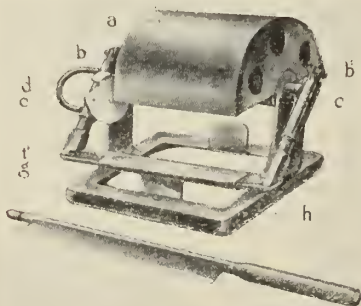
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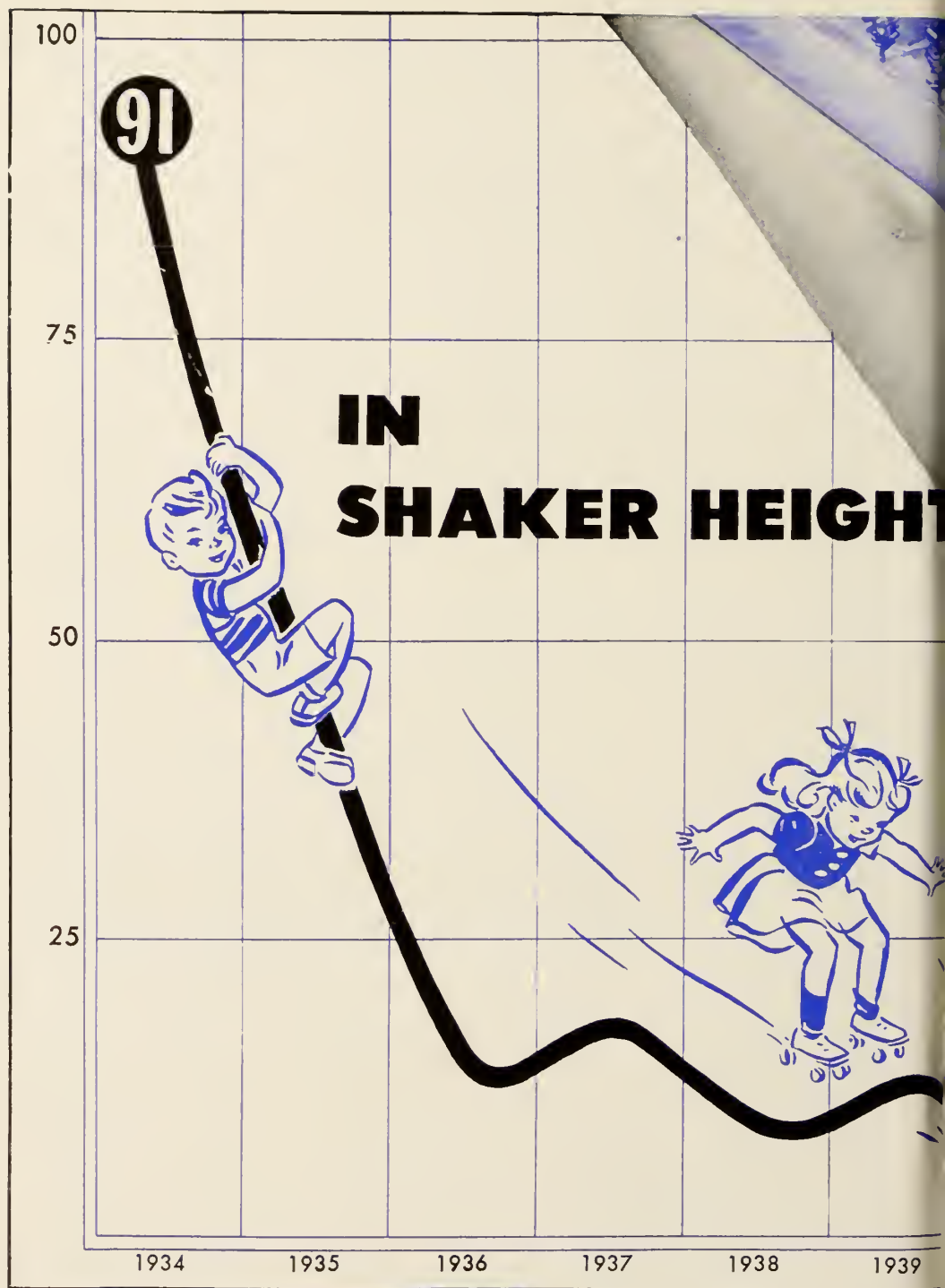
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SURGICAL TREATMENT OF INGUINAL HERNIA

WYATT C. SIMPSON, M. D., F. A. C. S.
Florence, Alabama

It is well to analyze a standard procedure from the ground up from time to time, particularly when it is productive of results that fall short of perfection. That the regularly established and generally done procedures for the repair of inguinal hernia do fall short of producing perfect results is evidenced by the frequent minor modifications of the Bassini and Halsted operations which appear in the literature, and also by the oft recurring statement that published statistics regarding recurrences are unavoidably, and optimistically, inaccurate. Even they give recurrence rates of 3 to 7 per cent for indirect and 20 to 30 per cent for direct.¹

Service in station and general hospitals in the Army of the United States in the past few years has given the author an opportunity to operate on a rather large number of inguinal hernias, and to observe a considerable variety of techniques of repair employed by other surgeons.

It seems strange that there should be so much disagreement regarding the solution of a purely mechanical problem in a localized anatomic area which presents little variety in structure. Yet profound students propose fundamentally different maneuvers to protect against recurrence of the repaired inguinal hernia. There is general agreement on the principles outlined by Professor Polya:² 1. Avoidance of tension when suturing; 2. Imbrication of layers which close the defect; and 3. Care that the weak places in different layers do not overlap each other

but are covered quite reliably by other layers. There is, however, considerable disagreement as to the means of accomplishing these aims. Some surgeons are convinced of the importance of transplanting the stump of the excised sac to the under surface of the transversus abdominis,³ whereas others condemn the procedure.⁴ Some favor excision of the cremaster muscle and infundibuliform fascia⁵ and others consider it valuable in the repair.⁴ There is divergence of opinion on the desirability of placing the spermatic cord in front of or behind or between the layers of the newly constructed abdominal wall,⁶ and, finally, recent publications⁷ have besmirched the reputation for integrity which Poupert's ligament has long enjoyed as an anchor for the inguinal strata in hernia repair.

It is obvious that the last word has not been said on the problem of inguinal hernia repair. It is hoped that a reevaluation of the procedures in general use will, however, be profitable.

There are three fundamental aims in the repair of inguinal hernia: 1. Protection against recurrence lateral to the deep epi-

3. Mayo, C. W.: Personal Communication.

4. Rienhoff, W. F.: The Use of the Rectus Fascia for Closure of the Lower, or Critical Angle of the Wound in the Repair of Inguinal Hernia, *Surgery* 8: 326-339 (August) '40.

5. Malcolm, R. B.: Recent Advances in the Treatment of Hernia, *Surg. Clin., N. A.*, 20: 141-151 (Feb.) '40.

6. Swinton, N. W.: The Use of Silk in the Repair of Abdominal Hernias, *Surg. Clin. N. A.*, 21: 881-887 (June) '41.

7. McVay, C. B., and Anson, B. J.: A Fundamental Error in Current Methods of Inguinal Herniorrhaphy, *Surg., Gynec. & Obst.*, 74: 746-750 (March) '42.

1. McNealy, R. W.: Editorial. *Surg., Gynec. & Obst.* 74: 1158-1160 (June) '42.

2. Polya, E.: The Principle and Practice of the Radical Operations for Hernia, *Surgery* 8: 804-820 (Nov.) '40.

gastric vessels (indirect hernia); 2. Protection against recurrence medial to these vessels (direct hernia); and 3. Avoidance of jeopardy to the testicular blood supply.⁸

To accomplish the first aim the important thing is high ligation of the sac. This is facilitated by a liberal incision of the cremasteric muscle and infundibuliform fascia⁹ up to the attachment of the internal oblique muscle at the inguinal ligament before the spermatic cord and hernia sac are delivered. There is one problem which frequently confronts the author in the course of freeing the upper reaches of the hernia sac which is often the most troublesome part of the operation, yet no reference has been encountered in the literature to its management.

Having opened and freed the sac up to the level of the deep epigastric vessels, the finger is inserted through it medially, and the loose peritoneum pulled from the floor of Hesselbach's triangle (if any degree of "saddle-bag" hernia exists, and it usually does) thus converting any direct hernia sac into a continuation of the indirect. By this procedure the bladder usually comes up with the wall of the sac, forming a sort of sliding hernia. Obviously, unless the bladder is freed from the wall of the sac, the latter will have to be closed by an internal purse-string suture, as recommended by many.¹⁰ There are two disadvantages to this method: 1. An internal purse string does not give as secure a closure as does an encircling external suture ligation, and 2. In the repair of recurrent hernias, previously repaired elsewhere, the bulge has frequently been found to be due to bladder herniating through the internal ring. Therefore, it seems important to free thoroughly the bladder from the redundant peritoneum from Hesselbach's triangle so that it may be tucked back down in the pelvis and the transversalis fascia defect repaired around the cord to hold it there. Sharp dissection with the scalpel is usually necessary to free it, and a very thin peritoneum is left. If the hernia is on the

left side, the sigmoid must frequently be freed from the inside wall before the sac can be transfixed and ligated. It might appear that one is creating undue difficulties by this procedure, but it is felt that in no other way can the discrepancies of repair which have been mentioned be avoided. It is recognized that most "properly repaired hernias which recur, do so at the lower angle,"⁵ but unless these tedious precautions are taken 1. The bladder may be included in the transfixing suture; 2. The direct component of the sac will not be removed; or 3. A bladder hernia may result. In this connection a recent recommendation has been made to resect the herniating portion of the bladder. It is not believed that this should ever be necessary, unless an actual diverticulum of the bladder exists.

As to the debate regarding transplanting the stump of the sac upward under the transversus abdominis and internal oblique muscles, it probably does not make any difference whether this is done or not. If the sac has been ligated high enough, its stump will retract upward anyway. However, the contention that this is a dangerous procedure on the basis of creating a pouch of peritoneum for potential herniation appears untenable. The pouch, if any, is directed away from the direction of potential herniation, and is sealed against the under surface of the muscles.

In repairing the transversalis fascia at the internal ring, the suggestion of Polya,² that the cord be directed slightly upward at its exit, appears to be worth following. Despite the general opinion⁴ that the cord has little or nothing to do with the development of recurrent hernia, this seems a reasonable and easy precautionary measure.

With regard to the management of a sliding hernia of bowel,¹⁰ it is rarely if ever necessary to handle it through a separate abdominal incision. Utilizing a running suture high on the anterior wall of the sac and as close to the bowel on the posterior wall as possible, then pushing the bowel up and closing the transversalis fascia in front of it meets the requirements of repair.

It is with regard to measures devoted to accomplishment of the second aim (prevention of recurrence as a direct hernia) that the greatest variety of procedures has been suggested, for the vast majority of recurrent

8. Baker, J. W., and Evoy, M. D.: Insult to the Testicle in Herniorrhaphy, *Surg., Gynec. & Obst.*, 75: 285-288 (Sept.) '42.

9. Halsted, W. S.: The Radical Cure of Inguinal Hernia in the Male, *Ann. Surg.* 17: 542-556, 1893.

10. Zimmerman, L. M., and Laufman, H.: Sliding Hernia, *Surg., Gynec. & Obst.*, 75: 76-78 (July) '42.

herniations are through the area medial to the deep epigastric vessels. The rather large percentage of recurrences in the repair of inguinal walls whose primary deficiency was in this triangle, when the Bassini technique or some modification thereof was used, suggests that some fundamentally different technique is desirable; that difficulties will not be overcome simply by substituting sutures of silk, or cotton, or fascia for those of surgical gut.

One difficulty lies in the fact that the conjoined tendon frequently is not a separate tendinous structure;⁴ instead the aponeurosis of the internal oblique is inserted upon the ventral surface of the rectus sheath. Consequently it is the elements that make up the rectus sheath which must be united to the lateral tissues. There is considerable likelihood of separation of such a suture line unless a relaxing incision is made in the anterior sheath of the rectus, as suggested by Rienhoff.⁴ This is simpler than, and equally efficacious to, the somewhat more elaborate technique advised by Polya² and Bloodgood,¹¹ in which, after opening the anterior rectus sheath, the rectus muscle itself is sutured to the inguinal ligament. The logic of sewing a muscle with a pull perpendicular to the structure to which it is being united is questionable (if it is logical to place sutures in muscle at any time).¹² A very satisfactory repair is accomplished, however, by following Polya's technique of overlapping fascia, modifying it only to the extent that no sutures go through the rectus muscle.

In recent contribution, McVay and Anson^{7, 13} call attention to what they refer to as a "fundamental error in current methods of hernia repair." They state: "The inguinal ligament is not the insertion of the transversalis fascia, the transversus abdominis aponeurosis, or the internal oblique aponeurosis; its relationship to these structures is simply one of contiguity. From an anatomical standpoint this is reason enough

for endeavoring to find some other structure for anchorage. Moreover, from a surgical point of view, the inguinal ligament, contrary to the usual conception, is loosely held in its convex position by surrounding fascia; it is easily shelled out of its fascial bed by the finger or a blunt instrument, to become merely the free margin of an aponeurosis . . . In the repair of large indirect and direct hernias, it is recommended that the inguinal layers be sutured to Cooper's ligament and not to the inguinal ligament. It is pointed out that the inguinal ligament is neither the normal insertion of the inguinal strata, nor a suitable substitute for such attachment; on the contrary, the superior pubic ligament, Cooper's ligament, which is the normal insertion, is readily accessible, intrinsically strong, and directly fixed to bone."⁷ These conclusions are based on careful studies in the dissecting room and merit serious attention.

In repairing a direct hernia, unassociated with any indirect sac, I see no necessity of opening the peritoneum. Instead, the protrusion is reduced and the transversalis fascia,¹⁴ which is nearly always identifiable as a resistant layer on each side of the defect, is united before a reconstruction of the wall is begun. The author is among those who favor repairing the inguinal wall behind the cord, for the following reasons: 1. It seems illogical to bring the cord out of the lowest angle of the wound when that is the site of the greatest number of recurrences; despite the contention of Rienhoff⁴ that "the cord with its cremasteric muscle and fascia is a valuable addition of tissue to augment the paucity existing in the lower angle of the wound." It would appear that to place any reliance for support on a mass of veins and areolar tissue, together with some thin muscle tissue which may quite likely shrink to smaller size,¹⁵ is to admit a potentially weak link in the chain of repair. On the contrary, it seems better to excise carefully the cremasteric muscle and fascia and clear the floor of the inguinal canal by ligating and excising the accessory spermatic branch of the deep epigastric artery (first palpating

11. Modern Surgical Technic (Thorek): Philadelphia, J. B. Lippincott Co., Pp. 1682-1684.

12. Stein, H. E., and Casten, D.: A Study of Recurrences Following Inguinal Hernioplasty, *Surgery* 14: 819-830, 1943.

13. Jennings, W. J., and Anson, B. J.: A New Method of Repair for Indirect Inguinal Hernia Considered in Reference to Parietal Anatomy, *Surg., Gynec. & Obst.*, 74: 697-708 (March) '42.

14. McMillan, W. M.: Technique for the Repair of Inguinal Hernia, *Surg. Clin. N. A.*, 22: 9-18 (Feb.) '42.

15. Graham, H. F.: Aponeurosis Overlap for the Cure of Inguinal Hernia, *Surg. Clin. N. A.*, 22: 597-600 (April) '42.

the spermatic cord for pulsation in the external spermatic artery, of course).

The tissues on the union of which the success of the repair depends, having thus been cleared, are sutured together. It is believed it makes very little difference what suture material is used, provided the proper layers are united by fine suture material, without tension. Neither does it seem necessary to introduce a fascial suture, as the sutures in common use will hold the layers in approximation long enough to permit their union, provided they are approximated without tension; and if they are approximated under tension, they will tear at the point of suture insertion anyway.² Where a defect of such magnitude exists that it cannot be closed without tension by fascial and aponeurotic layers after relaxing incision in the anterior rectus sheath, then fascia lata sheets may be used to advantage.²

In conclusion, and with all due humility ("where the great hunters have failed, I cast my sorry and mortal shaft at their immortal quarry"),¹⁶ the following conception of certain requirements of a logical and reliable standard procedure for the repair of inguinal hernia is submitted:

A. For prevention of recurrence as an indirect hernia.

1. Wide opening of cremasteric muscle and infundibuliform fascia.

2. High isolation of sac and separation of bladder therefrom.

3. Closure of transversalis fascia medial to cord at internal ring so as to direct it upward at its exit.

B. For prevention of recurrence as a direct hernia.

1. Excision of cremasteric muscle and fascia.

2. Clear definition of fascial and aponeurotic layers to be united.

3. Repair of defect in transversalis fascia.

4. Relaxing incision in anterior rectus sheath.^{4, 6}

5. Union of aponeurosis of internal oblique (be it as conjoined tendon or rectus sheath) to Gimbernat's and Cooper's ligament behind the cord.

C. For avoidance of jeopardy to the testicular blood supply.

1. See to it that the little finger tip can be easily inserted along the cord through all the apertures left for its exit.⁸

16. Benet, S. V.: "John Brown's Body."

THE EVALUATION OF VARIOUS CASE FINDING PROCEDURES IN A TUBERCULOSIS CONTROL PROGRAM

WILLIAM GROSFELD, M. D.
Decatur, Alabama

After the discovery of tubercle bacilli by Koch, it seemed that it would be but a short time before tuberculosis would be brought under complete control as had been the case in many other diseases the epidemiology of which was known. It soon became apparent, however, that this would not be so easy a task as it seemed at first that it might be. After initial years of over-enthusiasm, a few principles were laid down which are as true and forceful today as they were when originally initiated. First, there was the finding and isolation of the open active cases and, second, an intensive search and continued observation of those in contact with active pulmonary tuberculosis.

With the rapid decline in the tuberculosis mortality rate, it was soon discovered that

it was not sufficient to wait for the cases to present themselves to clinics or physicians; and that, if the job of eradicating tuberculosis was to be completed or the rate of incidence reduced, at least to a minimum, it would be necessary to go out into the field and do mass surveys in order to find the early cases. Beginning in 1935 in two large counties in New Jersey, with a total population of approximately 750,000 (Bergen and Passaic Counties), exactly that was tried.

Today, with so much talk about mass x-ray surveys of the general population, it might be wise to stop, think and evaluate the work that has already been done so that concentration may be had on those specific groups which will net the greatest yield of tuberculosis until such time as mass x-ray-

ing of the entire population can be pursued at regular stated intervals.

In the New Jersey survey referred to (in which the author participated), the control survey was begun with grammar and high school students. Of 1,040 grammar school pupils tuberculin tested, only one active primary infection was found among positive reactors x-rayed. It must be borne in mind that in a very young school child with an active reinfection type of tuberculosis, the child is ill enough that he does not attend school and, therefore, he would not be included, as a rule, in a survey of this type. The reactors of 85,246 high school students were tested and x-rayed; and in the last two years of the survey only Junior and Senior students were examined. While this may seem to be a very large group it must not be forgotten that negative reactors were re-tested yearly and positive reactors were re-x-rayed annually. In this number of students examined in a period of eight years, 87 cases of adult or reinfection tuberculosis were found, a rate of slightly over one-tenth of one per cent.

Further, the reactors of 5,674 college students and student nurses in the general hospitals of the two counties were tested and x-rayed, and 43 cases of tuberculosis were found, a percentage of three-fourths of one per cent.

Another study was made of the old age indigent group. Here 1,895 individuals were x-rayed and 285 cases of tuberculosis were discovered, for a fifteen per cent average, one-third of which were open active cases.

In the depression era, 1936 to 1939, a total of 14,964 people in relief groups such as the W. P. A., N. Y. A. and other alphabetical organizations was also surveyed, and of these 560 showed evidence of pulmonary tuberculosis—3.7 per cent of the number.

In the years 1939 to 1942 an attempt was made to x-ray the Negro population of approximately 10,000 in Passaic County. Only 1,220 were x-rayed, and thirty cases of tuberculosis were discovered. This unsatisfactory result is inconsistent and unexplainable in the face of the known fact that the morbidity and mortality rates in the Negro race are much higher than in the white. The author was not alone in these findings for everyone who attempted the study was disappointed in the results obtained. In 1940,

Dr. J. Earl Stewart, Consultant to the Negro Health Program, State Health Department, Trenton, New Jersey, examined 1,000 migratory Negro workers coming from the South to work in the fields and he reported that not one active case of tuberculosis was found. It is therefore evident that much more intensive work has to be done with this group if tuberculosis in Negroes is to be controlled.

In 1940 the examination of industrial groups (textile workers, textile dyers and others) was begun in New Jersey, 8,137 individuals being x-rayed, of whom 80 were found to have tuberculosis, a rate of slightly less than one per cent.

The last group consists of clinic cases of Passaic County only, since the figures for the clinic service in Bergen County are not available to the writer. To the clinic in Passaic County came three types of patients:

First, patients referred by their physicians for diagnosis or to rule out tuberculosis. They accounted for about twenty per cent of the case load.

Second, patients who had subjective symptoms, such as easy fatigability, cough, loss of weight and hemoptysis. When tuberculosis was discovered in this particular group, it was, as a rule, in an advanced stage and they comprised thirty per cent of clinic patients.

Third, patients who were familial contacts to open cases of tuberculosis. This was a very rich source of tuberculosis.

In a seven-year period 14,144 new patients were examined, of whom 1,972 had tuberculosis—a rate slightly in excess of 13 per cent.

At this point let us recapitulate the findings:

Grammar School	1,040	1 active primary	0.0%
High School	85,246	87 new cases	0.1%
College Students and Student Nurses	5,674	43 new cases	0.75%
Old Age Indigent	1,895	285 new cases	15.0%
Relief Clients	14,964	560 new cases	3.7%
Negro Survey	1,220	30 new cases	2.0%
Industrial Groups	8,137	80 new cases	1.0%
Clinic Cases (New)	14,144	1,972 new cases	13.0%
Total	132,320		

Before drawing a conclusion, it might be added that the percentages obtained in the

survey were in agreement with similar work done in the groups described above in New York City and State, Chicago, Philadelphia, and other centers. These are the conclusions reached:

1. Results obtained by examination of grammar and high school students do not justify the cost, time and effort. While it is known that this group is the one most easily examined, it is believed that the educational value of this type of survey has been much overrated.

2. It is felt that a careful examination of every student nurse, college student and interne is necessary, and that this group should be examined at least once a year.

3. While the relief clients' group gave a 3.7 percentage rate of tuberculosis, careful study of these cases revealed that at least 80 per cent were old healed lesions.

4. The failure of the survey among the Negroes has already been touched on.

5. There is reason to believe that mass surveys, especially of low wage industrial groups, is a very valuable adjunct in the control of tuberculosis.

6. In the recapitulation it was plainly shown that clinic service is the richest source of tuberculosis case finding.

As Medical Director of the Morgan County Tuberculosis Sanatorium, I do not have the opportunity of knowing the exact details of the state-wide tuberculosis control program of the Alabama State Health Department. I am aware that some counties, especially in the northern part of the State, have a high school program yearly. From verbal communication with Dr. Frank Chapman, former Director of the department's Division of Tuberculosis Control, I am informed that more than 150,000 individuals in low income groups have been x-rayed by photo-fluoroscopic units. In clinics of the nine counties serviced by this Sanatorium, 2,098 new patients have been x-rayed and 350 cases of tuberculosis found, an average of 16 per cent. From these few figures it can be seen that the Alabama State Health Department is doing a splendid job in tuberculosis control and can compare its results very favorably with any state in the Union.

From the above it is evident that a well-rounded clinic service, plus mass x-raying of the low wage industrial groups, will eventually bring the tuberculosis control program into full flower.

FURTHER DATA ON THE PATHOGENESIS OF FIBROBLASTIC NEOPLASMS

DENSITY RATIO OF TISSUE COMPUTED BY THE AUTHOR'S EXPOSURE METER METHOD

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In a former paper, Rosenthal and the writer described the role of blood serum in the formation of keloids and similar tissue neoplasms.

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The research on the dog was performed, under the author's direction, by Messrs. Rittlemeyer and Dupre as a research problem in the above college. The author wishes to express his sincere thanks to Dr. Rosenthal, of Marquette University Medical School, for his complete pathological studies and preparations which were employed in this study. A portion of this paper was read before the Eastern Section of the American Federation for Clinical Research at the Philadelphia General Hospital, Philadelphia, Pa. on December 8th, 1945.

Recently, the author has been able to produce fibromatous changes in his thighs through multiple injections of his own blood serum injected intracutaneously. A control area, on the opposite thigh, was injected simultaneously with normal saline solution. After an interval of time had elapsed, both areas were removed by the writer and were forwarded to Doctor Samuel Rosenthal, of Milwaukee, Wisconsin, for pathological studies. Definite fibroblastic changes were reported in the experimental (blood serum treated) block of tissue. The fibroplasia, which was noted, resembled the tissue changes which are observed in keloids.

The above paper stressed the importance of blood serum extravasations into normal tissue, for when this takes place, as in the case of burns, fibromatous tissue changes may be expected.

A colleague raised recently the question as to why no fibroblastic changes occur when mare's serum is injected subcutaneously in humans. It has been shown by Rittelmeyer and Dupre, working under the direction of the author, that keloidal growths may not be produced in dogs' skin through the use of blood serum injections prepared from the dog's own blood. Dogs very rarely, if ever, produce keloids following injury. However, cattle and horses do have these fibromatous changes which may follow serious traumatic injuries of the skin.

It is not likely that mare's serum can produce a chemotropic effect on human fibroblasts. It seems that such a response is limited to specific species of animals and in some cases, as that of the dog, inspissated blood serum may not motivate the production of fibroplasia. Hence, it is unexpected that mare's serum will activate keloidal changes in human skin.

I am not positive, at this time, whether or not blood serum is involved in the production of such pathological entities as uterine fibroids. However, from what information we have, this may well be an etiological factor in such a condition. Such a possibility is surely worthy of further investigation from this new approach to the pathogenesis of neoplastic growths.

The question arose recently as to exactly what percentage of fibroblastic changes were brought about when the tumorous tissue was compared to the normal or control tissue. Tissue repair, through fibroplasia, can be measured by means of the curve of velocity of fibroplasia. A wound's tensile strength is measured by determining the weight which is necessary to rupture the healing wound. Another method is to count the number of cellular changes which have to do with the reparative process (mainly fibroblasts). Both methods are quite involved and time-consuming.

The author wished to have a measured comparison of the normal and the fibroplastic tissue changes in the form of a simple ratio. By such a method, it would be easy to express the exact comparison in den-

sity between the control and the tumor tissue. If both tissue sections, that is, the control and the experimental or tumor sections, were cut the same thickness and were stained in an identical manner, the amount of light, when passed through these sections, could be read and compared easily by means of a light meter, such as a Weston photo cell or a similar apparatus. Readings were found to be obtained easily by preparing prints of the photomicrographic sections (experimental and control tissues) in an identical manner. Care was taken to develop these prints for the same time interval. With the use of a diffused source of light, in the author's case, a spot light, meter readings were noted when the prints were held with their backs to the light. Effort should be made to obtain the maximum and the minimum readings. An average can be taken of these readings for a comparison of the density of the two sections.

If a particular area of density is needed, photomicrographic lantern slides can be prepared, in a similar manner, of both sections. These are projected on a beaded screen and the reading of the particular areas can be obtained rather easily. In the case of the author's tumor, which he developed in his thigh, the reading on the Weston meter was 50. The normal skin tissue reading was 100. Hence, the density of the tumorous growth was twice that of the normal control tissue.

SUMMARY

1. Repeated blood serum injections, given intracutaneously in the author's thigh, produced a fibromatous neoplastic growth which was similar to a keloid. The control area, on the opposite thigh, when injected with normal saline solution, remained negative.

2. Inspissated blood serum seems to exert a definite chemotropic response on fibroblasts which migrate to this area and proceed to develop fibroblastic skin changes.

3. This chemotropic response of inspissated blood serum seems to be specific to the type of animal employed. Blood serum from a different species does not seem to cause a chemotropic response of fibroblasts in the tissue of another animal.

4. It appears that only the blood serum of a similar animal initiates fibroblastic

changes in the skin tissue. Some animals, such as dogs, do not seem to have a propensity to develop keloids.

5. The density of tissue growth can be measured by means of a Weston exposure meter, or another similar apparatus. Ratios, for comparison, can be made easily by comparing the density readings of a tumorous growth with that of normal tissue which has been processed in an identical manner. Photomicrographic prints or lantern slides can be employed in order to obtain such readings.

6. In the author's experiment, the tumor

growth was twice as dense as was the control (normal) tissue.

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LIPOID NEPHROSIS

A REVIEW OF THE DISEASE WITH REPORT OF CASE

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"Lipoid nephrosis is a rare disease, characterized by generalized edema, a tendency toward chronicity, wave-like weight curve, and urine showing marked albuminuria and cylindruria, but no red blood cells. There is no elevation of the systemic blood pressure or of the non-protein nitrogenous constituents of the blood, but the blood cholesterol is usually elevated. Pathologically, involvement of the arterial system, renal or general, is not found, and tubular swelling and degeneration are marked in the kidneys."

This is the definition given by Aldrich¹ in Brennemann's² *Practice of Pediatrics*. The disease is a clinical entity and is not to be confused with other types of nephrosis or tubular nephritides, nor with glomerulonephritis (hemorrhagic).

Since the initial publications of Munk³

and Epstein,⁴ there has been much debate as to whether or not lipoid nephrosis is a clinical entity, one school of thought maintaining that the syndrome is merely a type of glomerulonephritis while others think it is a distinct clinical and pathological entity. (Schiff,⁵ Hanns.⁶) Major⁷ reports an increasing amount of opinion favoring the latter view.

The diagnostic criteria of the disease are (1) edema, (2) marked albuminuria and cylindruria, and (3) no hypertension or increase in non-protein nitrogen (Aldrich¹).

The etiology of lipoid nephrosis is unknown. Leiter⁸ gives a very complete review in his publication. The following is a

1. Aldrich, C. A.: Clinical Types of Nephritis in Childhood, *J. A. M. A.* 94: 16-37, 1930. Concentrated Human Blood Serum as a Diuretic in the Treatment of Nephrosis, *J. A. M. A.* 111: 129-133, 1938.

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brief summary of various theories regarding the etiology:

(1) Munk³ and Epstein:⁴ These authors presented the theory that the edema is due to decrease in plasma proteins, particularly of the albumin fraction. This decrease is thought to be due either to loss of albumin in the urine, because the albumin molecule is smaller than the globulin, or because some metabolic change shifted the quality of the protein in the blood plasma.

(2) Volhard, Fahr,⁹ Aschoff and others: These authors suggested that the edema is due to increased permeability of the capillaries generally.

(3) Kollert¹⁰ thought the edema to be a result of general cellular disintegration with lipoidosis, thus causing the tissues to become more hydrophilic.

(4) Lowenthal¹¹ believed the disease to be primarily a disturbance of lipoid metabolism.

(5) Elwyn thought the changes found in nephrosis to be secondary to glomerulonephritis.

(6) Bell¹² believed there was a renal lesion in which there is a partial obstruction to the glomeruli, but, as Leiter points out, his cases do not appear to have been ones of typical pure nephrosis.

(7) Marriott,¹³ Clausen¹⁴ and others felt the disease is due to infections or toxins.

(8) Aldrich¹ thinks possibly the cause will be found to be not a simple one but a combination of toxic and metabolic factors.

Predisposing factors in the disease are youth, undernutrition, poverty and anemia. The most prominent of these is youth. Lipoid nephrosis is an edema disease. The course is one of fluctuating edema as indicated by the rise and fall of the weight curve. The patient's sense of well being varies with the edema and he may look entirely well during remissions. The duration of this fluctuating course may vary from a

few months to years. Some patients have but one prolonged attack of edema which may terminate in recovery unless intercurrent infection causes death. Other patients go on month after month with ever-changing manifestations. Recovery usually takes place suddenly, but may be gradual. Sudden recovery usually follows acute infections. This is not identical with the renal crises, because after a renal crisis the patient may show albumin in the urine and has subsequent attacks of edema.

The edema is of the shifting type just before diuresis. In those who do not have complete diuresis there is a tendency for fluid to accumulate gradually in the serous cavities and the most dependent portions of the body and for the face and upper extremities to fluctuate in their swelling. Ascites may be so severe as to require paracentesis. Symptoms of infections do not differ from the usual except for peritonitis which is very insidious in its onset.

The prominent features of laboratory examinations are as follows: (1) marked albuminuria, (2) normal blood pressure, (3) non-protein nitrogen normal throughout the course of the disease, (4) high blood cholesterol, (5) normal renal function except for the excretion of water (phenolsulphonphthalein test normal), (6) high specific gravity of the urine, (7) some leukocytosis, usually, (8) Wassermann negative, and (9) blood serum looks milky due to contained fat.

Intercurrent infections are the only complications known and there are no sequelae, except that patients tend to be undersized after recovery. The prognosis is better than in chronic nephritis. There is a 50-50 chance of recovery from lipoid nephrosis. Long duration of the illness usually indicates poorer prognosis.

The above description of the disease is taken from text-books, most of it from Brennemann's² *Practice of Pediatrics*, and will be used as a guide for comparison with the case to be reported.

Treatment: There is no specific treatment for the disease. Blood plasma, intravenously, probably offers the most hope, but results from its use have not been spectacular. Our case received a total of 8,615 cc. in 35 separate intravenous infusions. He also had 6 transfusions of whole citrated

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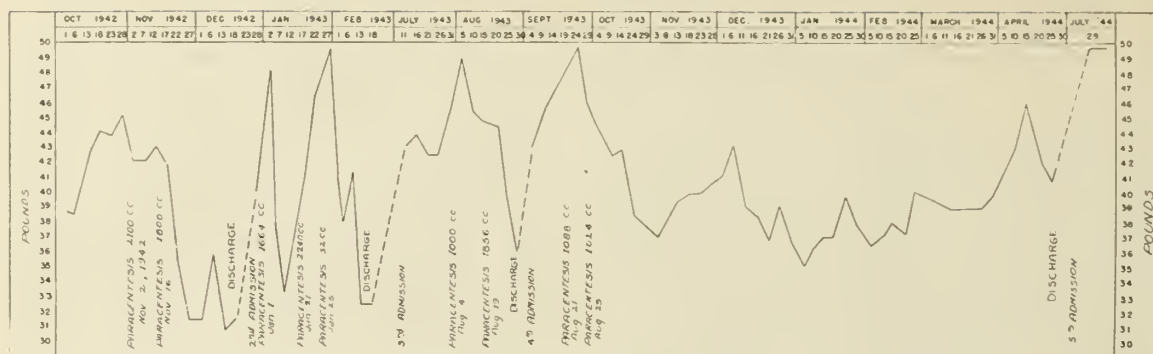
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COURSE OF FLUCTUATING EDEMA IN REPORTED CASE OF LIPOID NEPHROSIS

blood and numerous injections of 50% glucose, intravenously. He also had 3 injections of salyrgan, intramuscularly: 1 cc. on 1-8-43, 0.5 cc. on 1-11-43, and 1 cc. on 1-28-43, during periods of oliguria. After the dose on 1-8-43, urinary output increased from 14 ounces to 32 ounces but fell the next day to 7 ounces. After the dose on 1-11-43, weight and urinary output remained stationary. After the dose on 1-28-43, the weight dropped from 49½ pounds to 46¾ pounds, but the output increased only 4 ounces; i. e., from 8 ounces on 1-27-43 to 12 ounces on 1-28-43 and fell to 6 ounces on the next day. Large doses of Ventrex were also tried without demonstrable effect. He received a high protein diet with adequate supplemental vitamins. During the periods of acute distress he was in an oxygen tent.

REPORT OF CASE

C. E. D., Jr., a white male aged 2 years 11 months, was admitted to the Employees' Hospital on September 26, 1942. The chief complaint was Bright's disease, the informants being the parents.

Two weeks previously the parents noted that the child was swollen about the body and eyes. He had an infection of the foreskin at this time, but this cleared up the next day. He was treated by Dr. W. A. Clyde until the time of admission to the hospital. There was history of oliguria for the past two weeks, the parents stating that the child voided about 1 teacupful daily except for one 24-hour period during which he did not void at all. Swelling was said to have subsided on liquid diet and oral $MgSO_4$, only to recur later.

Past History: The child had pertussis in June-July 1942, and had one cold as a baby. There was no history of any other illnesses.

Family History: Mother and father are living and well. The child has no siblings. There is no history of familial diseases.

Birth History: Birth weight was 8 pounds 2 ounces. Delivery was normal. Baby was full

term. Weight gain and development were normal.

Review of Systems: Negative except for history of slight constipation and for the history given in present illness.

Physical examination revealed an edematous child, apparently of the stated age, in no acute distress. The eyelids were edematous, as was the body generally—feet, legs, ankles, hands and arms. No free fluid was demonstrable in the abdominal cavity. Tonsils were hypertrophied, 3 plus, not inflamed. Blood pressure was 104/60. Weight was 37½ pounds. Lungs were clear. Heart was normal. Abdomen was distended. There were no organs or masses palpable. Scrotum was slightly edematous.

The tentative diagnosis was acute nephritis or nephrosis. On September 30, 1942 examination by one of us revealed the child to be still more edematous about the eyes than at the time of admission. He stated that it was still impossible to say whether this case was nephrosis or nephritis for a certainty, but it appeared more like a nephrosis. On October 7, 1942 the patient was seen by Dr. Hughes Kennedy who found the child to be "markedly edematous generally, with ascites. Lids about closed, with surrounding skin red. Ears o. k. Nose open. Teeth o. k. Tonsils 2 plus, not acute. Small anterior cervical glands. Heart regular, no hypertrophy or murmurs. Rate 100. Blood pressure 110/82. Chest clear and resonant. Liver not tender. Pitting edema of extremities." His impression was nephrosis.

On October 8, 1942 the edema about the eyes was much improved, but the generalized edema was unchanged.

Abdominal paracenteses were done on November 2, 1942 and on November 16, 1942, with removal of approximately 2,100 cc. of slightly cloudy, straw-colored, ascitic fluid each time. Cultures of this fluid were sterile.

Patient was discharged from the hospital December 21, 1942 somewhat improved. Weight was 31 pounds.

Oliguria was pronounced during the first part of this hospital stay, the patient voiding only 2 to 8 ounces per 24 hours, until November 16, when improvement was noted. From November 21 to 27 there was marked diuresis (24 to 25 ounces

daily) and urinary output remained good until discharge.

SECOND ADMISSION

He was readmitted to the hospital on December 26, 1942, 5 days later. Readmission note stated that patient had gained 7 pounds during these 5 days. He had been drowsy during the past 2 days and the abdomen had swollen markedly. He had voided about 15 ounces daily.

Physical examination was not remarkable except for marked ascites and generalized edema. His weight was 39 pounds. The ascites was so pronounced that the skin of the abdomen was very tight.

Abdominal paracentesis was done on 1-1-43, with removal of 52 ounces (1,664 cc.) of clear ascitic fluid. Body weight before paracentesis was done was 48 pounds; the next day it was 42 pounds. On 1-8-43 it was noted that the abdomen was filling again, and on 1-13-43 the face was getting edematous. On 1-21-43 abdominal paracentesis was done, with removal of 70 ounces (2,240 cc.).

Patient was discharged 2-19-43. Weight was 32½ pounds. Urinary output varied from 4 ounces to 40 ounces daily, with a tendency to diuresis near the end of his stay in the hospital.

THIRD ADMISSION

Patient was readmitted to the hospital on July 11, 1943, weighing 42¾ pounds.

Interval History: Patient had been fairly well following discharge except for several attacks of tonsillitis until 10 weeks before admission at which time he began to show some increase in weight and decrease in urinary output (mother having kept accurate record). No lethargy. Mild diarrhea (4 to 5 stools per day) for the past 4 or 5 days.

Physical examination was not remarkable except for edema about the eyes, and marked ascites. Blood pressure was 110/80.

On 7-12-43 there had been some weight loss but edema about the eyes was more marked.

Abdominal paracentesis was done on 8-4-43, with removal of 33+ ounces (1,000 cc.); on 8-19-43 abdominal paracentesis was done, with removal of 58 ounces (1,856 cc.).

Patient was discharged on 8-30-43. Weight was 36½ pounds.

During this admission there were alternating periods of oliguria and adequate urinary output, varying even from day to day. For example: urinary output on 7-29-43 was 4 ounces, and on 7-30-43 was 25 ounces.

FOURTH ADMISSION

The edema had increased. Weight was 43 pounds. The examination was remarkable only because of anasarca.

On 9-21-43 abdominal paracentesis was done, with removal of 34 ounces (1,088 cc.) of pearly grey fluid. On 9-25-43 abdominal paracentesis was done, with removal of 32 ounces (1,024 cc.) of pearly grey fluid. On 1-23-44 the child had otitis media and tonsillitis, and was treated with sulfathiazole for 12 doses. Erysipeloid rash of the

abdomen was noted on 4-8-44, which faded under local symptomatic treatment with calamine lotion, as the child began to lose weight. On 4-26-44 a note was made that the child was losing weight, and he was discharged on the following day. Weight was 40½ pounds.

FIFTH ADMISSION

Patient was readmitted to the hospital on July 29, 1944. Weight was 49½ pounds.

Interval history revealed satisfactory course since discharge until one week before admission when edema became more pronounced.

Physical examination: Blood pressure 120/88. Pulse 100. Temperature 99.2°. Weight 49½ pounds. The child appeared edematous, lethargic and sick, but examination was otherwise negative.

Endocrinologists, in treating hypothyroidism, have found that thyroxine, intramuscularly, in 2 mg. to 5 mg. doses will lower the blood cholesterol to normal. For this reason it was given to a child with nephrosis at New York Post-Graduate Hospital to determine if it would have any effect on the high cholesterol level of nephrosis. In this case a renal crisis occurred, and the child immediately lost all of its edema and the cholesterol fell to normal.

So, on August 1, 1944, with blood cholesterol level of 852 mgs., we gave our patient 3 mgs. of thyroxine, intramuscularly, at 5:30 P. M. About 11:30 P. M. he began to fret, and temperature rose to 104°. Pulse was 140-150. Blood pressure was 120/90. He was agitated and sweating profusely and calling for an oxygen tent. It was thought he was having a reaction to thyroxine. General physical examination was negative, except for the extreme edema throughout 8-2-44. On 8-2-44 there were a few rales in both bases and the chest plate revealed a fluid deposit of the entire right chest. The child was extremely sick and semicomatose during the next few days.

On 8-4-44 thoracentesis yielded 200 cc. of yellow turbid fluid, which revealed a cell count of 500,000 per cu. mm., and pneumococci were identified on a direct smear. The child's condition remained critical in spite of 15,000 units of penicillin, intramuscularly, every 3 hours, begun on 8-3-44. The patient's urinary output during this time was only a few drams daily, and we were afraid to use the sulfa drugs. The temperature appeared to be decreasing. The output increased to 20 ounces on 8-11-44. The temperature was normal on 8-9-44 and 8-10-44. On 8-11-44 the temperature began to rise again, reaching 104.8° on 8-13-44, with 30 ounces output.

On 8-8-44 neck was stiff and patient had positive Kernig. Spinal tap revealed cloudy fluid which contained 1,300 pus cells per cu. mm., and pneumococci were identified on direct smear. At this time 10,000 units of penicillin were given intrathecally twice daily until 8-12-44, on which date it was given only once. Thereafter, the patient had 10,000 units, intrathecally, b. d., until 8-15-44. Inasmuch as the temperature had gone up and the output was better, we felt that penicillin alone was not controlling the infection, and we had to take a chance with the sulfa drug, so

sulfadiazine was started on 8-13-44. The temperature dropped the following day to normal. The albumin was 2+ on 8-15-44 and 1+ on 8-16-44 and negative on 8-17-44, the output staying good. The drug was discontinued on 9-11-44 because of 3 plus red blood cells in the urine. When these disappeared sulfapyridine was started on 9-15-44.

Since spinal fluid cultures were still positive, intramuscular penicillin was resumed on 9-11-45, 15,000 units every three hours and 10,000 units daily in the spinal canal, and continued until 9-23-44. On 9-25-44 intramuscular penicillin was discontinued. On 10-12-44 sulfapyridine, which was begun on 9-15-44, was discontinued, spinal fluid cultures being negative, with a cell count of 5.

Patient was discharged from the hospital on 10-13-44 apparently completely recovered. Urine was negative.

Laboratory Data: The urine on 9-26-42 was reported as albumin loaded with fine granular casts 1+, and an occasional white blood cell. On 9-30-42 urine was reported: albumin loaded, 0.3% glucose, specific gravity 1.040, fine granular casts 3+, and coarse granular casts 3+. The urine consistently contained 4+ albumin except for occasional days when there would be from a trace to 3+. The specific gravity was consistently above 1.020 and coarse and fine granular casts were present in most specimens in large amounts. A daily urinalysis was done on the patient while he was in the hospital. There were several occasions when there was an occasional red blood cell reported in the urine, but these were very infrequent. During sulfatherapy in September 1944 the urine contained 2+ red blood cells on one day and 3+ on the next day, 9-11-44, but this cleared when the drug was discontinued. On 8-16-44 urine contained 1+ albumin and specific gravity was 1.010. On 8-17-44 the urine was negative and remained so except for occasional days when a trace of albumin was reported, with an occasional red blood cell reported on two occasions, until 9-9-44 when the above episode of hematuria occurred. From 9-11-44 until discharge the urine was negative except for a trace of albumin on four occasions.

See Tables 1 and 2 for blood chemistry and cholesterol data.

TABLE 1.—BLOOD CHEMISTRY

Date	Glucose	Non-Protein Nitrogen	Creatinine
9/26/42		29	1.45
9/28/42	Q. N. S.	33	1.45
10/2/42	67	58	2.2
10/7/42	54	48	0.8
10/14/42	74	40	0.8
10/22/42	64	40.5	1.45
10/26/42		38	1.15
10/30/42		33	1.45
11/2/42	77	34.5	1.15
11/6/42	81	42.5	1.8

12/1/42	Q. N. S.	40.5	1.8
12/11/42	64	40	2.2
12/30/42		38	1.8
1/28/43		25.5	1.15
8/3/43	84	25.5	1.00
8/17/43	86	35.0	1.5
8/23/43	97	31.0	1.9
9/15/43		30.0	
11/16/43		30.0	2.15
1/27/44	84	26.0	.20
2/21/44	80	25.0	.90
7/30/44	87	29.0	1.75
8/12/44	80	26.0	2.6
9/8/44	60	29.0	2.15

TABLE 2.—BLOOD CHOLESTEROL

Date	Result
9/28/42	400
11/2/42	400
11/6/42	160
7/31/44	852
8/2/44	(Blood serum milky with fat) 1,080
8/14/44	920
8/18/44	468
8/24/44	130
10/9/44	220
2/7/45	152

OUT-CLINIC FOLLOW-UP

Urine specimens once a week from the time of discharge were consistently negative except for specimens on the following dates: 11-20-44, a trace of albumin and a very occasional white blood cell; 11-27-44, an occasional white blood cell and an occasional red blood cell. Specimens on 1-4-45, 1-26-45, 2-7-45, 3-2-45, and 3-26-45 were all negative.

On 2-7-45 the patient was examined in the Out-Clinic of the Employees' Hospital by one of us. At that time the physical examination revealed the following: Age 5 years and 4 months. Weight 45½ pounds. Temperature 98.6. Blood pressure was 102/70. Pulse 84. The general appearance was good. The child had gained weight, but was not edematous. Ear, nose and throat examination was negative except for 3+ cryptic tonsils which were not inflamed. Heart and lungs were normal. The liver was palpable at the costal margin, smooth and not tender. The skin of the abdomen showed many old paracenteses scars in lower half. Knee kicks were normally active. The child appeared well and was walking well.

The laboratory examinations were reported as follows: Urine: negative. Blood: hemoglobin 75%, white blood cells 9,250, red blood cells 4,300,000. Glucose 87 mg. per cent, non-protein nitrogen 23.5 mg., creatinin 0.6 mg. Cholesterol 152 mg. per 100 cc. blood. Total serum protein 5.65 gm. per 100 cc. blood, albumin 3.34 gms., globulin 2.31 gms.

The child is above average in mentality, and except for periods of lethargy when edema was so intense and during the acute infections he was bright, responsive to questioning and cooperative. His parents are intelligent and cooperative.

COMMENT

There are several laboratory procedures which were not done in this case which would have made the case more complete from a purely scientific viewpoint but which are not necessary to establish this as a case of lipoid nephrosis.

The urine should have been examined under the polarizing microscope for refractile fat bodies. Determinations of the serum protein with albumin and globulin ratios during the acute stages of the illness would have been of interest.

The accepted normal for the non-protein nitrogen in the blood is 25 mg. to 40 mg. per cent. This case exceeded this normal on three occasions by 18 mg. per cent, 8 mg. per cent and 2.5 mg. per cent, respectively, and there were several occasions on which the determination resulted in a figure at the top limit of the normal. None of these figures is sufficiently high to consider this a case of chronic nephritis, however; and all non-protein nitrogen determinations during the last 2 years of the disease were absolutely within normal limits. (See Table No. 1.)

The urine on several occasions showed an occasional red blood cell, and on two occasions after rather intensive sulfatherapy had 2+ and 3+ red blood cells which cleared promptly, when the drug was discontinued. Otherwise the repeated urinalyses fit this case absolutely into the diagnosis of lipoid nephrosis by the criteria laid down above: marked albuminuria and cylindruria, with a high specific gravity and no red blood cells.

The course of fluctuating edema as shown graphically (Figure 1) is characteristic of the disease and at times bears no relationship to the amount of urinary output, as strikingly evidenced during the period from September 16 to September 20, 1943, when the child was voiding 25 to 58 ounces per 24 hours, with his edema increasing steadily. At other times it did appear that the edema increased as the oliguria became pronounced.

The accepted normal for blood cholesterol is 140-180 mgs. per cent. Except for one determination (November 6, 1942), which was probably in error, this case exhibits a persistently elevated blood cholesterol during the whole course and an extremely high fig-

ure at the height of the crisis, with a downward trend as recovery took place and a normal figure at the last examination.

The normal value for serum proteins is about 7.5%, with the albumin fraction 4.5%, the globulin fraction 2.5% and fibrinogen 0.5%. The one determination on this patient, done after apparent recovery, gave a somewhat lowered figure for total serum proteins; and although the albumin fraction was greater than the globulin, the ratio was not ideal.

Enough time has not yet elapsed to draw definite conclusions as to complete and permanent recovery in this case. It will be interesting to follow the case with periodic check-ups.

SUMMARY

1. Diagnostic criteria for a diagnosis of lipoid nephrosis are given.
2. A brief review of the literature on the subject is given with various theories of etiology of the disease.
3. Report of a case in a 3 year old white male child is given which follows the typical course of the disease and which terminated in apparent complete recovery after pneumonia, empyema, peritonitis, and meningitis due to the pneumococcus. In this case penicillin alone did not control the infection completely, but did tide the child over the period of oliguria. Combined treatment with penicillin and sulfa drugs was necessary. The urinary output remained good after sulfatherapy was started.

CONCLUSIONS

1. Lipoid (lipid) nephrosis is a distinct clinical entity and deserves a separate classification in the list of nephritides.
2. No specific treatment alters the course of the disease to any appreciable extent.
3. Theoretically, blood plasma given intravenously is logical therapy although in this case it could not be clearly shown to be of benefit.
4. The disease follows a more or less definite pattern and terminates in death or complete recovery following intercurrent infections.
5. The advent of penicillin and sulfa drugs may result in revision of the 50-50 chance of survival in these patients to a more favorable figure.

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THE PRESIDENT'S NATIONAL HEALTH PROGRAM AND THE NEW WAGNER BILL

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Last week *The Journal* published the message sent to Congress on November 19, by President Harry S. Truman submitting a National Health Program.¹ On the same day Senator Wagner of New York introduced for himself and Senator Murray Senate S. 1606, and Congressman Dingell introduced into the House the same version of the new Wagner-Murray-Dingell bill. Obviously a number of conferences between those interested must have preceded the coordinated action that occurred. Senator Wagner accompanied his introduction of the measure with another opening statement, a brief summary of the health provisions and a long series of questions and answers about the prepaid medical care provisions of the National Health Act of 1945. The language of the President in his message to the Congress and of Senator Wagner in his statement to the Senate and the language of the measure itself are the same trite locutions that the advocates of federal compulsory sickness insurance have used for these

many years in trying to force these proposals on the American people. According to Arthur Sears Henning, "the compulsory health insurance plan is chiefly the brainchild of Isidore S. Falk, research director of the Social Security Board, and Michael M. Davis, a member of the C. I. O. Political Action Committee." . . .

Mr. Wagner in his opening statement again informs the Senate that this bill is the result of the constructive suggestions of many outstanding medical authorities and of labor, farm, consumer and health organizations interested in improving the nation's health. Neither the President nor Mr. Wagner nor the Social Security Board made the slightest attempt to consult any representatives of the American Medical Association, which now embraces in its membership more than 125,000 American physicians. Typical of the kind of government that the bureaucrats would force on the American people is this technic of consulting advisers who are known in advance to be in complete agreement with the persons whom they are supposed to advise and of studiously avoiding any one who might offer a contrary opinion. This is government by minority with a vengeance.

The insidious strategy that has been employed in recent years, leading toward culmination by approval of the President of the United States, is clearly apparent to those with an understanding of what has been going on. Since the time when Michael Davis and his associates engineered the formation of the Committee on the Costs of Medical Care down to the present, a gradual enlistment has been secured in behalf of socialized medicine of every agency that could be induced to combine in a movement toward socialization of the American system of government. Around their banner have rallied the members of the so-called Boas' Physicians Forum, certain doctors of philosophy in the field of economics and sociology, the socialistic element in the American Public Health Association and those employed in governmental health agencies who thirst for increased power and expansion of the bureaus that they serve. Let the people of our country realize that the movement for the placing of American medicine under the control of the federal government through a system of federal compulsory sickness in-

1. November 24, 1945 number of *The Journal of the American Medical Association*.

insurance is the first step toward a regimentation of utilities, of industries, of finance and eventually of labor itself. This is the kind of regimentation that led to totalitarianism in Germany and the downfall of that nation. Its prime consideration is deduction from the pay of the worker and taxation of the employer so that the government does for the people most of the things that our people in the United States have been accustomed to do for themselves. The time may yet come when the American worker, as was the case with the German worker, will have more deductions from his wages than "take home" pay.

In the President's message to the Congress and in the material written for Mr. Wagner by those whom he employs and consults in the preparation of his proposals, constantly reiterated is the statement that these proposals are not "socialized medicine." The first of Mr. Wagner's questions and answers is concerned with this question in semantics. Worse than socialized medicine is "state medicine." In any system of state medicine the government collects the funds available, manages the service and distributes the payments. Is not this what the Wagner-Murray-Dingell bill would accomplish? True, in the proposed legislation for a federal system of compulsory sickness insurance, patients are told that they will have free choice of doctors; doctors are told that they will have the right to refuse any patients; but the bill provides that the Surgeon General can limit the number of patients that a physician will see, and that the Surgeon General will provide other physicians when too many patients select one or more of the physicians in a community. The measure mentions free choice of doctor for the patient, but it is free choice within limitations. It is free choice of the doctors who are willing to work under the system. It is free choice if the doctor is willing to work under a fee bill set up by the government. It is free choice if the doctor is willing to accept a payment of so much per person per year for his services. It is free choice if the doctor is willing to work as a salaried member of the group. It is free choice if the doctor is willing to abide by a majority vote of the doctors licensed to practice in his community. What kind of free choice is that?

Senator Wagner has always insisted that compulsory health insurance—really sickness insurance—is not socialized medicine. Actually the proposals involve both socialized medicine and state medicine. The American people are entitled to straightforward, honest statements from their representatives as to what such proposed measures would do to them and to their physicians. They have not had such a straightforward statement either from the President in his message or from Senator Wagner in his statement to the Congress.

In opening his message to the Congress, President Truman referred again to the rejections of registrants under the draft and to the rejections of women who applied to the Women's Army Corps and other women's services. Every fundamental principle of the scientific interpretation of statistics has been violated by the proponents of federal compulsory sickness insurance in their utilization of these figures as propaganda for the measures they propose. The facts have been provided in several previous editorials in *The Journal*. One needs only to recognize that the standards of physical fitness for military service changed greatly from the army of preparedness to the end of the war. Men who were rejected as physically unfit for military service in the first year of war were accepted as quite fit for complete service or for limited service in the latter years of the war. Furthermore, none of the proponents of this legislation have ever admitted frankly, as they should if they are interested in an honest scientific statement of the facts, that a tremendous number of those rejected as unfit could not be made more fit by any knowledge available to modern medicine today.

In his questions and answers presented to the Congress, Senator Wagner again challenges the statement that health conditions and standards of medical service in the United States are higher than in any other large country in the world. Here are more "tricks" with words. The figures for New Zealand have often appeared better than those of our country, but New Zealand is quite different from the United States and not in any sense of the word comparable. And even if it were comparable, the statistics for New Zealand concern its white European population and carefully avoid cita-

tion of its colored and native population. As we go to press New Zealand's system of socialized medicine reportedly faces failure and bankruptcy. Mr. Wagner even challenges the figures for life expectancy in the United States. Let him consult the most recent figures prepared by the leading life insurance companies in this country, which have a financial stake in the life expectancy of the people; he will discover how far ahead the United States really is of any other country in the world with or without a national compulsory system of medical care.

The President's program includes five features. First is the proposal to grant federal aid for the building of hospitals and health centers throughout the nation. Both the American Medical Association and the American Hospital Association have approved the principles of the Hill-Burton bill, which make this proposal effective. Senator Wagner in his statement to the Congress reminds us that he himself introduced a hospital construction bill in 1940. He has now eliminated from the new Wagner-Murray-Dingell bill the section in the previous draft which concerned hospital construction. This at least is fortunate for the American people because the provisions of the Hill-Burton bill, as modified by the Senate committee which conducted the hearings and which has reported the bill favorably to the Senate,² are much more wise and much more scientific than the proposals of Wagner, Murray and Dingell. Under the Hill-Burton bill money will not be spent until the need is shown by a survey conducted in the individual state. Furthermore, state organizations will be developed which will have the responsibility for allocation of funds and the control of the expenditure of funds. The place of the federal government will be to act as custodian of the funds and to provide the funds when adequate evidence of their need and proper utilization is supplied. Incidentally, this measure recognizes that some areas of the country may need funds much more than do others, and beyond the ability of the individual state to match any federal appropriation.

The second recommendation by President Truman is for an expansion of maternal and

child health services. Apparently President Truman failed to take into account the pending Pepper bill for maternal and child health, which was analyzed in an editorial published in *The Journal* on November 10. Senator Wagner in his statement to the Senate does recognize the existence of other proposals. The Wagner-Murray-Dingell bill would make increased grants-in-aid through the Children's Bureau to the individual states for maternal and child health and crippled children, the states developing their own plans, which, of course, would have to have the approval of the chief of the Children's Bureau. Here the grants are made variable according to the established need in the individual states. The Wagner-Murray-Dingell bill requires that the chief of the Children's Bureau enter into agreements or cooperative working arrangements with the Surgeon General of the Public Health Service to insure coordination in the administration of programs and services in this field. This at least is a recognition of the fact that federal coordination of health activities is a fundamental need in our government at this time. The Congress has just given authority to the Chief Executive to transfer various agencies in order to secure coordinated action and to bring about unified policies. The American Medical Association has recommended again and again and again that the number one step necessary in coordination of health activities is removal of the Children's Bureau from the Department of Labor to the United States Public Health Service in the Federal Security Agency. Previous presidents have apparently been unable to accomplish this highly desirable objective. The American Medical Association favors the utilization of federal or state funds for the extension of maternal and child health services where needed.

President Truman also urges an extension of public health services throughout the United States. At present less than half the counties in the United States are provided with full time public health service. Perhaps some of our counties could never utilize a full time public health service efficiently; groups of counties could, of course, cooperate. Nevertheless the American Medical Association has been among the leaders of the nation in urging that ade-

2. The Hill-Burton bill has now passed the Senate.—Editor.

quate public health service be made available in every community in our country.

Confusion again prevails when the proposals of the President's message and of the Wagner-Murray-Dingell bill are read in connection with the proposals of the various measures for establishing a National Science Foundation. This Mr. Wagner recognizes in his statement to the Congress; he points out that the Senate Committee on Military Affairs has before it legislation providing for the promotion of medical research and professional education. He indicates that these proposals remain in his revised National Health Act because he wants to help promising individuals without financial means to get a medical education, and he wants to overcome "the restrictions which the medical schools apply particularly to persons of minority groups." For these purposes the sums of \$10,000,000 the first year and \$15,000,000 the second year are mentioned. Incidentally, the Senator wisely recognizes the necessity for training adequate personnel in the field of public health if progress is to be made in that field. Nevertheless the Congress would do well to place in some single agency all of the various programs allocating funds for training personnel in the field of research, medicine, the public health, the basic medical sciences and related fields of study. Scientists throughout the nation are agreed on the desirability of a National Science Foundation. Physicians favor increased research on cancer and on mental disease and indeed in every medical field in which research could be helpful. They do feel, however, that any National Science Foundation should be directed by a competent board of scientists, who could coordinate research and education. Apparently the present administration seems to prefer a National Science Foundation which would be headed by a politically appointed director. Apparently Wagner, Murray and Dingell seem to prefer a system in which the Surgeon General of the United States Public Health Service would allocate funds to medical schools, research institutions and similar agencies that meet his approval. The movies have a czar who directs and coordinates their activities in certain fields, but they can remove him when they wish to do so and they are free to resign from his support when they wish

to do so. Similarly baseball has its czar. Now apparently our government wants a czar for medicine and another czar for research, but there is no way in which those who would be compelled to subscribe for the establishment of the system and for those who would be compelled to work under the system to resign. Their freedom would become a thing of the past.

Incidentally, in his statement on medical research and education, Senator Wagner has one quite revolutionary paragraph. Under the Constitution of the United States the control of medical practice is within the province of the individual states. Here is the statement of Senator Wagner:

State licensure laws are so complex, so lacking in uniformity and so obstructive of interstate mobility of qualified practitioners that some federal legislation is necessary to bring order out of this chaos. There are no medical schools in some states, and measures to remedy this defect should be considered. Finally, the discrimination which most medical schools practice against student applicants from minority groups requires congressional consideration and appropriate action.

Regardless of whether or not some of the abuses to which the Senator refers exist, the Senator finds only one possible remedy—compulsion by the federal government and removal from the individual states of their right to control their own policies. Furthermore, has he made the slightest possible investigation to find out whether or not every state in the United States can support and operate successfully a modern medical school? Has he considered the necessity for teachers, for pupils, for patients? One is reminded of the state which built with federal funds a hospital for crippled children that exhausted the needs of a hospital for crippled children in that state within two years.

The fifth proposal in the President's program and in Senator Wagner's measure is compensation for loss of earnings due to sickness. The American Medical Association through its House of Delegates has consistently favored such insurance. Most strange among the changes in the present measure offered by Wagner, Murray and Dingell from their previous promulgation is the failure to indicate anywhere in the proposed measure the taxation to be provided on the worker and on the employer to provide funds for this measure. True, the

President in his message mentions 4 per cent on the first \$3,600 earned by an employee, but the measure itself makes no such mention. Perhaps the mention was avoided deliberately by Senators Wagner and Murray and by Congressman Dingell so that the bill could be referred to the Senate Committee on Education and Labor, of which Senator Murray is chairman, rather than to the Senate Committee on Finance, to which the previous measure was referred. This may serve to secure hearings on the legislation and thus to keep it alive rather than to permit it to sink into the innocuous desuetude that was the fate of the previous measure.

Many of the answers included by Senator Wagner in the questions and answers submitted by him to the Senate are denials of the charges repeatedly made against his proposals by those who wish to see the principles of initiative, democracy and freedom maintained in American medicine. Thus he categorically denies that his measure "will destroy the private practice of medicine," that it will place the medical profession "under the direction of one man, the Surgeon General of the United States Public Health Service," that "the National Advisory Medical Policy Council will have no authority," that "the hospitalization provisions in the bill" will "destroy the voluntary hospital system," that "medical education will be controlled by the Surgeon General," that "the bill will plunge the physicians into political slavery," that "people will be obliged to take any doctor the Surgeon General tells them to," that "the Surgeon General of the Public Health Service" will have "the power and authority to designate which doctors can be specialists." The Senator by sophistic argument and smooth phrases categorically denies all of these charges against this measure; *The Journal of the American Medical Association* now insists that every one of these charges against the measure is valid and that the actual text of the measure itself is the proof of that validity.

No one will ever convince the physicians of the United States that the Wagner-Murray-Dingell bill is not socialized medicine. By this measure the medical profession and the sick whom they treat will be directly under political control. By this measure

the great system of private hospitals and community hospitals that have grown up in our country will depend for their continued operation on funds paid to them by a federal government agency. By this measure the philanthropic efforts for the care of the sick, which have been the pride of our nation, will be forever deterred. Through this measure competent young men who would enter the medical profession will be forced to seek other fields of action still remaining under our democracy which still permit the exercise of individual initiative and freedom of thought and action. By this measure doctors in America would become clock watchers and slaves of a system. Now, if ever, those who believe in the American democracy must make their belief known to their representatives, so that the attempt to enslave medicine as first among the professions, industries or trades to be socialized will meet the ignominious defeat it deserves.

BORIC ACID

"Many indispensable drugs are known to be dangerous when used in improper dose or by unusual routes of administration—digitalis, iodine and others immediately come to mind as illustrations. Certain toxic drugs—arsenicals for example—continue in use because of their effectiveness and because nontoxic substitutes of proved effectiveness are lacking. It cannot sensibly be argued that an effective drug should be dropped from use simply because the occasional patient reacts unfavorably to the ordinary dose or because untoward reactions follow the accidental administration of an excessive dose. When, however, a drug can be shown to be almost entirely ineffective and at the same time dangerous even when used in ordinary ways, it is time to remove that drug from general use as rapidly as possible."

"Search of medical literature reveals many instances of accidental poisoning with boric acid and not a few following its calculated use in ointment and powder form. Fatal poisonings have been reported following the placing of boric acid powder into wounds and boric acid solution into the bladder, the empyema cavity and the bowel, and unreported instances of death following

its use in the stomach in gastroscopy have come to our attention. Both the powder and the solution have caused death when they were accidentally administered in food. A recent occurrence of this kind, according to newspaper reports, involved poisoning of 19 infants in a New Jersey hospital, with fatal results in 4. At about the same time Dr. R. R. Cross, director of public health of Illinois, requested hospitals to eliminate boric acid from the inventory of drugs kept on hand for use in maternity divisions. This request is reported to have followed the death of 2 infants in an Illinois hospital, attributed to boric acid poisoning. Boric acid preparations were removed from use in the children's ward of University Hospital (Michigan) several years ago following the fatal poisoning of an infant."

Thus does Watson¹ open his discussion of this time-honored drug. And he goes on to tell us that "with the advent of considerably more effective germicides, use of boric acid or its solutions has almost ceased. Probably the principal uses of boric acid or its solutions are in the eye and for irrigating body cavities. Both of these uses have been abandoned in the University Hospital." And we are further told that "in the early part of World War II boric acid ointment was officially suggested as a dressing for burned areas of skin. This suggestion was later withdrawn—a wise decision, it would seem, in view of the demonstrated ease with which the damaged skin may absorb drugs. In 1910 Rubin and Donner called attention to the rapid absorption of boric acid from denuded areas such as burns."

Watson then goes on to quote several pharmacologists who feel much as he does and in conclusion he says that "a case of fatal boric acid poisoning following use of boric ointment U. S. P. in eczema was observed. Use of boric acid preparations should be discouraged because of their limited usefulness and the real dangers of their accidental and intentional use. The medical profession as a whole probably puts unwarranted confidence in boric acid preparations and is likely to forget that boric acid is a poison."

Most practitioners probably realize that the germicidal value of boric acid is quite

low indeed. And the fact that it does have toxic effects has long been known to the more alert and informed members of the profession. But the notion that boric acid makes an absolutely harmless ointment, solution or powder has long been too widespread and Watson has done well to challenge it. Possibly the Ann Arbor investigator is too strong in his condemnation, but that he is upon firm ground cannot be denied. While it may not be in order to outlaw boric acid preparations entirely, the time has certainly come when they should no longer be used recklessly and indiscriminately.

The Surgery of Peptic Ulcer—Perforation and hemorrhage are the emergencies which dramatize the life of the ulcer patient. When they appear upon the stage, it is usurped. All other concomitants, all other characters playing a part, become but the supporting cast and are for the time forgotten, as minor characters are not seen when Hamlet speaks. But the ulcer patient cannot be forgotten at other times. Obstructive cases are the bane of the internist and the glory of the surgeon. Duodenal ulcers causing obstruction are ulcers of long standing and are usually found in elderly patients, but may be seen rarely in younger patients. In such young patients the obstruction is not usually from the formation of scar tissue but has appeared rather suddenly and is due to edematous swelling caused by an acute exacerbation with inflammatory reaction around the ulcer. Obstructive cases of slow development gradually cause a gastritis from food fermentation within the stomach and the cells which normally produce hydrochloric acid become atrophic, thus further decreasing the hydrochloric acid content of the gastric secretion which normally decreases with advancing years. Gastro-enterostomy finds its greatest usefulness, its sublimest justification, in these cases. The elderly patient with an obstructive lesion of his duodenum and with a low acidity may yield to a gastro-enterostomy with the assurance, confidence, and jubilation with which a ship enters its home port, for he shall as certainly find the comfort and contentment from which he has been estranged, as will the sailor find a warm hearth and a happy welcome. The younger patient with an obstructive lesion should be looked upon with suspicion. It should be determined whether the obstruction is due to spasm or to edema rather than to the formation of scar tissue. The patient should be fed through an indwelling duodenal tube for a period of two to three weeks in order to permit the edema to subside and to afford a better opportunity for an investigation as to the cause of obstruction.—*Turner, J. M. A. Georgia, Dec. '45.*

1. Watson, E. H.: Boric Acid, A Dangerous Drug of Little Value, *J. A. M. A.* 129: 332 (Sept. 29) 1945.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

B. F. Austin, M. D.
State Health Officer

PUBLIC HEALTH REFLECTIONS

In the early spring of 1937 a young Chinese public health worker came to Alabama on a fellowship grant from the Rockefeller Foundation's International Health Division and spent several weeks studying this State's public health problems and its machinery for dealing with them. The war in Europe was still more than two years in the future, but Japan had already invaded and occupied Manchuria, and Hitler was causing great uneasiness throughout the world. While in this State that Chinese visitor confided to one or two of his newly made American friends that he was greatly concerned about a possible attack upon China by Japan. Knowing how poorly prepared his country was to defend itself against such an attack, he pointed out that, if the enemy would only wait a few months, China would be in a better position to defend itself. It would take about a year to get ready, he said, and the Chinese people and government were hoping they would not have to go to war before the summer of 1938.

The Japanese must also have known how unprepared China was for war, and that knowledge must have strengthened their determination not to give it the year it needed to save itself from invasion and perhaps defeat. Just a few weeks after that Chinese health worker expressed his and his fellow-countrymen's hope for that precious 12 months of time the invasion of China began. We did not know it at the time, but the second World War was on.

Thus the war touched the State Health Department even before it began. It has been touching it in a most important and vital way ever since.

During the more than two years between the invasion of China and Hitler's march into Poland, however, the thoughts and plans of the Department's personnel were directed into paths of peace, however much they may have worried in their private thinking

about the steadily lengthening shadow of war. Even as late as August 1939, there was a strong hope that a second World War would, somehow, be averted and that eventually the last international crisis would be dissolved peaceably. During those past few months of peace in Europe, therefore, the State Department of Health devoted itself officially to such matters as the introduction of the Merit System for State employees, the rising toll of heart disease, the latest reports on deaths from influenza and measures to give Alabama mothers and babies a better chance to live and be healthy. Visitors from numerous foreign countries, who had been coming here for many years through the generosity of the Rockefeller Foundation's International Health Division, continued to come, and, while they spoke of the danger of war, there appeared to be little realization of its being about to burst upon the world. Members of the State Health Department staff continued to take advanced courses to prepare themselves for more effective work in their chosen fields. A poliomyelitis outbreak in South Carolina caused much anxiety. One of the visiting public health workers—a Mexican—told about his country's campaign against malaria. There was a cheering decline in deaths in this State during a four-month period. A warning against an increased prevalence of whooping cough came from the State Health Officer. About a month and a half before Hitler unleashed his legions the State Health Officer spoke at a civic club luncheon in Birmingham, discussing the effect of climate on health and personal efficiency. Fifteen young physicians took the examinations given by the State Board of Medical Examiners to qualify for the privilege of practicing their profession in this State, with little, if any, thought of the possibility that they, or a large percentage of them, would in a few years be fighting illness and wounds on or near battlefields far from the peaceful Alabama communities where, in June 1939, they were planning to spend their lives. The State Health Department waged a futile campaign to require prenuptial examinations for syphilis, in-

cluding blood tests, during the 1939 session of the Legislature. Such were the peaceful and peace-prompted activities of Alabama's public health agencies in the summer of 1939.

The dismemberment of Czechoslovakia had occurred several months before but Europe was still uneasily at peace when a member of the faculty of Slovak University, Bratislava (Slovakia) paid a brief visit to Montgomery. In an interview soon after his arrival, he talked, not of the fate of his country, nor of war or the threat of war, but of Slovakia's successful campaign against rabies and smallpox. Another foreign visitor arriving about the same time was a public health official from Finland. And he did not talk about war either, at least publicly. Instead, he told of his country's ambitious plans to expand its public health work, using the Alabama public health system as a model, especially in the organization of local units to correspond with our county health departments. (How little did he or we know that war would make it impossible for him to carry out his ambitious plans and that, for many months, his country would have little time to devote to the saving of human life, so intent would it be upon its destruction!)

Alabama's public health workers labored at the tasks of peaceful health-building up to the very outbreak of hostilities. On the day the war began in Europe one of the Montgomery newspapers published an article quoting State Health Department figures on heart disease deaths. The following day, as German armies plunged more deeply into Poland and it was hard to keep one's mind on one's tasks, so great was the interest in the war, there was an article on tuberculosis. The State's public health agencies were still geared to the needs of a peaceful world, and war-stricken Europe was thousands of miles away.

The war seemed appreciably nearer, however, after a member of the State Health Department staff returned to Montgomery following a visit to Canada. He told his fellow-staff members how the struggle in Europe had already affected life in our friendly neighbor country to the north. He saw or heard almost no brass bands during his visit, he said, and there was a marked absence of "war fever" or flag-waving, but he

found a Dominion-wide determination to fight the war to a finish. He told of seeing guards at railroad bridges, manufacturing plants and other places where enemy agents might wish to place bombs. Soldiers were drilling everywhere, some in uniform and others in civilian clothing. Such scenes, familiar to all of us later, seemed strange then.

The annual meeting of the Southern Medical Association was held in Memphis in November and was attended by several members of the State Health Department staff. The new war's imprint was plainly visible as that gathering got under way. Although the State Health Department representatives spoke on such peacetime topics as Alabama's great leaders of the past in public health work, the results of milk studies, maternity hygiene and health education, other speakers devoted their talks and papers to the war. One of them was Dr. Seale Harris, of Birmingham, a colonel in the First World War, who investigated the nutrition of the people of Germany and Austria soon after the Armistice and reported his findings to the Peace Conference. He spoke on the probable role of food and particularly of the Germans' ability to obtain it in the new war and predicted that the battle of food would determine the outcome of the struggle.

In the closing weeks of 1939 Dr. Janet Welch, of the Medical Missionary Service in Nyasaland, a British African protectorate, arrived in Alabama to study this State's public health work. She of course was not unusual in that respect, as others from all over the world had been doing the same thing for many years. But her visit was unique in another respect. She had recently spent some time in England and told her new friends among the State Health Department staff about life in that country under war conditions and of crossing the submarine-infested Atlantic in a blacked-out ship, with every precaution against being torpedoed. She was the first person to bring stories of personal experiences in one of the countries in which people were actually dying at enemy hands. Incidentally, Dr. Welch expressed much admiration for what she saw in Alabama and said she hoped to put the fruits of her visit here to good use after her return to her regular

medical missionary duties. Talking to her about her own adventures on the other side and about the experiences of her friends and relatives still in England, as recounted in their letters to her, made the war appear dangerously close to Alabama.

In late February 1940, while the major war was still in its so-called "phony" stage as the Nazis gathered their strength for the devastating offensives of the spring and summer, the State Health Officer received from the already mentioned public health official of Finland a letter describing the plight of his fellow-countrymen as a result of the Russo-Finnish war. The war, he wrote, had brought a grave shortage of vaccine to curb epidemics. He asked for supplies of anything that might be sent—clothing, war material, sulfapyridine, typhoid vaccine, tetanus serum or anything else that might be helpful. Moved by the conditions described in that message and by the firm friendship then existing between Finland and the United States and not foreseeing that that country would soon be aligned with this country's mortal enemies, the State Health Officer authorized the members of the State Health Department's Bureau of Laboratories to donate to the Finnish Relief Fund, with headquarters in New York, 1,000 50-cc. bottles of typhoid vaccine—enough to provide immunity to approximately 20,000 persons. At the same time the State Health Officer instructed a member of the staff to solicit cash contributions from State Health Department personnel to supplement contributions which had already been made to the Finnish Relief Fund in a recent fund-raising campaign.

In due time the State Health Officer received from former President Herbert Hoover, chairman of the Finnish Relief Fund, a letter announcing receipt of the typhoid vaccine and stating that it would soon be on its way to the war-torn Baltic republic. The former President wrote:

"The generous contribution of typhoid vaccine contributed by the Department of Public Health of the State of Alabama for Finnish Relief is here. It will be taken to Finland in the near future and put to good use there.

"The great service of this gift is to help Finland and to meet the great emergency needs of the Finnish people.

"On behalf of my colleagues and myself, I wish to express to you my appreciation for the encouragement to the whole Fund that this gift implies."

As we all know, the "phony war" came to an end with dramatic suddenness in the spring of 1940, and from then on the struggle became the most devastating and ruthless in history. On the night of April 8-9 the Germans put into execution their carefully laid plans to invade Norway and Denmark, and these two countries, after a pitifully weak and ineffective resistance, were completely overrun and subjugated in a matter of just a few weeks. Then the grey flood turned southward and on May 10 swept into Belgium, the Netherlands and Luxemburg, again advancing with the irresistible power of a tidal wave. That, one of the darkest moments in civilization's long history, had serious implications for the whole world, including the people of Alabama and its public health agencies. Some of those implications and the way the rapidly spreading war added to the problems of protecting the health of the people of this State will be discussed in a later article in this series.

BUREAU OF LABORATORIES

Harold P. Sawyer, M. D., Director

SPECIMENS EXAMINED

OCTOBER 1945

Examination for diphtheria bacilli and Vincent's	1,396
Agglutination tests (typhoid, Brill's, undulant fever)	719
Typhoid cultures (blood, feces and urine)	827
Examinations for malaria	753
Examinations for intestinal parasites	1,683
Serologic tests for syphilis (blood and spinal fluid)	27,137
Darkfield examinations	50
Examinations for gonococci	3,450
Examinations for tubercle bacilli	1,697
Examinations for Negri bodies (microscopic)	112
Water examinations	1,173
Milk examinations	1,714
Miscellaneous	463
Total	41,174

**ANNUAL MEETING
OF THE
ASSOCIATION
BIRMINGHAM
APRIL 16-18, 1946**

BUREAU OF PREVENTABLE DISEASES

D. G. Gill, M. D., Director

CURRENT MORBIDITY STATISTICS

1945

	Oct.	Nov.	E. E.* Nov.
Typhoid	12	13	14
Typhus	52	42	35
Malaria	281	87	427
Smallpox	0	0	0
Measles	5	8	20
Scarlet fever	72	121	128
Whooping cough	52	91	67
Diphtheria	126	116	125
Influenza	138	481	215
Mumps	39	37	41
Poliomyelitis	10	6	4
Encephalitis	1	0	1
Chickenpox	5	70	77
Tetanus	1	2	5
Tuberculosis	165	151	207
Pellagra	0	3	14
Meningitis	11	9	8
Pneumonia	113	191	229
Syphilis	22126	811	1315
Chancroid	50	13	11
Gonorrhea	4916	880	401
Ophthalmia	0	0	0
Trachoma	0	0	0
Tularemia	0	4	1
Undulant fever	10	1	3
Dengue	0	0	0
Amebic dysentery	5	4	0
Cancer	270	176	0
Rabies—Human cases	0	0	0
Positive animal heads	60	3	

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF SANITATION

T. H. Milford, M. S. in S. E., Director

SOME INSPECTION SUGGESTIONS

Contributed by

Franklin A. Clark, B. S., D. V. M.

Many undesirable conditions and practices have been tolerated by health departments and the public during the war because of the many abnormal conditions existing. Every inspector and health officer have had innumerable promises from food establishment operators, dairymen and others, regarding improvements which would be made when the war was over and normalcy had returned. Fighting has now stopped but it is doubtful if any one can ever determine definitely when normalcy has been reached again. Conditions probably will never be exactly the same for any establishment or individual as they were before the war. Therefore, the present is a time for inaugurating new plans, and for inspectors and health officers to insist that establishment operators start to work toward definite improvements.

Equipment needed in most establishments cannot be ordered for immediate delivery. But at least none or very little of it is rationed, and orders are being filled in the order received. This is all the more reason for insisting that operators place orders now for needed equipment so as to assure its delivery at the earliest possible time. Continued excuses that needed equipment cannot be secured should not be accepted unless the operator can show that he has placed an order for it.

Equipment is not the only thing commonly needed. In many establishments need for enlargement, remodelling or repair of the building is urgent. A definite time for completion of plans for needed alterations or improvements can and should be insisted upon, although determining a definite time for their completion may not be possible until after work is actually started. Health departments should insist, in practically all instances now, upon improvements of a permanent and complete nature rather than accepting patchwork repairs.

Good operation or methods have suffered in most establishments as much as or more than equipment or buildings. This has no doubt been due to shortage of labor, inexperienced and indifferent workers and many other factors. Indifference on the part of the operators has also been an important item, especially in those establishments usually employing poor methods. The regulations do not specify the number of employees for any establishment, their working conditions or pay. The operator is responsible for providing enough help to do the job, as well as to see that they do it right. This responsibility should again be placed squarely upon the operator. Operators of establishments where poor methods are employed should be given a notice, with a definite time limit, for improvement of methods in the same way that notices for needed physical improvements are given. Authority for this is carried in the regulations. A number of counties are now successfully employing the system suggested by Senior Sanitarian B. E. Phillips in the March 1945 issue of this Journal. Under this system, the County Board of Health sets a minimum score for operation, and authorizes and instructs the inspector and health officer to close immediately any establish-

ment the score of which falls below this minimum figure. At the same time, it establishes a minimum satisfactory score. When any establishment's score falls below this figure, the operator is immediately placed on notice that methods must be improved to a satisfactory point within a specified time if the establishment is to continue operation.

During the war most county sanitarians devoted a majority of their time to inspection work because of the difficulty of getting materials for installation or construction of sanitary facilities. Sanitation work will and should occupy more of their time in the future. Therefore, it is important to formulate definite plans for inspection so that it can be done in probably less time than in the past. Placing more responsibility on the operator, establishment of minimum scores for operation by the County Board of Health, and definitely outlining or detailing certain authority to the inspector so that he can inform operators of what will be required or even close places under authorized circumstances without having to wait to see the health officer and make a second or even more trips to the establishment will all enable him to secure satisfactory inspection results in less time expended than formerly.

One other inspection problem which both health officers and inspectors should give special consideration to now is pasteurization of milk. The amount of milk which is pasteurized, where there are plants, has increased tremendously during the war. This has been most gratifying from a public health standpoint. However, unfortunately, many plants in the state have left themselves wide open for serious criticism, and possible and even probable reversion by the consumer to the use of raw milk again.

Probably the chief reasons for increased use of pasteurized milk have been labor shortage and delivery problems of retail dairymen, although definitely more consumers have demanded pasteurized milk because of its added safety. Because of increased sales, practically all plants have increased output beyond the normal capacity of their plant. They too have had labor shortages and equipment restrictions and rationing, all of which lowered standards of operation. Customer demands far in excess

of supply have resulted in many of them drastically lowering quality by standardization to an unreasonably low butterfat content, using milk of poor quality, and in several instances reconstituting milk without stating this fact on the cap and informing the customers of why it was being done. The public is well aware of most of these practices. Unless the plants deliver milk with as good cream line and flavor as can be gotten from retail dairymen, it is almost certain that many customers will revert to use of raw milk again as soon as it becomes available.

Health officers and inspectors should insist that plants add needed equipment and space for properly handling and pasteurizing the volume of milk they have. They should also insist that plants use only approved milk and milk products which will assure a milk of good flavor and keeping quality. These two are definitely imposed upon them by the local milk ordinance. In addition, they should discuss with the operators potential adverse reaction by consumers of such practices as drastic standardization, and strongly urge discontinuance of any practice which might result in decreased use of pasteurized milk.

The Role of the Sanatorium—Primarily the duty of the sanatorium is to afford a place for the treatment and the healing, if that be possible, of a person affected with tuberculosis. To the individual patient it goes without saying that his own return to health seems the most important function of the sanatorium and that is true in his particular case. But to look at the situation more broadly, the benefits, which may profit society in general, constitute a much more important function than the curing of the individual patient. Then, the first principles of health control concern the actual care of the sick; after that, efforts for the prevention of disease are developed. Early diagnosis is necessary if we wish to increase the number of cures. It is surprising the number of advanced cases admitted to our institution; we see a few moderately advanced and still fewer minimal cases. Further education of the people is necessary so that they may recognize the early symptoms of tuberculosis and not wait to seek treatment when their disease is advanced. If the primary duty of sanatoria is curing tuberculosis, the emphasis should be laid on getting the patient under treatment as soon as possible. Let us remember the slogan. "Make the Sanatorium the First Resort, Rather Than the Last Resort in Tuberculosis."—*Spear, J. Iowa M. Soc., December 1945.*

BUREAU OF VITAL STATISTICS

Miss Ethel R. Hawley, Acting Director

PROVISIONAL MORTALITY STATISTICS

REPORTED BIRTHS, STILLBIRTHS, DEATHS FROM
CERTAIN IMPORTANT CAUSES AND RATES*

ALABAMA, SEPTEMBER 1945, 1944, 1943

Births, Stillbirths, and Causes of Death	Number of Deaths Registered— Sept. 1945			Rate (Annual Basis)		
	Total	White	Colored	1945	1944	1943
Births (exclusive of stillbirths)	6130	**	**	25.8	27.6	28.1
Stillbirths	192	**	**	30.4	27.8	35.7
Deaths (exclusive of stillbirths)	1818	1060	758	7.6	8.1	8.2
Infant deaths:						
Under one year	261	135	126	42.6	40.2	39.1
Under one month	168	88	80	27.4	23.8	25.3
Typhoid and paratyphoid 1, 2	3	2	1	1.3		0.8
Epidemic cerebrospinal meningitis 6	1		1	0.4	2.1	0.8
Scarlet fever 8					0.4	
Whooping cough 9	2		2	0.8	5.0	5.0
Diphtheria 10	4	3	1	1.7	4.6	1.3
Tuberculosis, all forms 13-22	79	36	43	33.2	40.0	41.6
Malaria 23	6	1	5	2.5	3.4	2.9
Syphilis 30	26	7	19	10.9	14.3	14.3
Influenza 33	6	4	2	2.5	2.1	3.4
Measles 35						
Poliomyelitis 36					0.8	0.4
Encephalitis 37	2	2		0.8		
Typhus fever 39	5	2	3	2.1	3.4	
Cancer, all forms 45-55	171	124	47	71.9	73.4	56.8
Diabetes mellitus 61	23	16	7	9.7	8.8	13.4
Pellagra 69	8	6	2	3.4	5.0	4.6
Alcoholism 77	4	3	1	1.7	0.4	0.8
Intracranial lesions 83	177	108	69	74.4	75.0	74.0
Diseases of the heart 90-95	354	228	126	148.8	163.1	163.1
Diseases of the arteries 96-99	13	10	3	5.5	3.4	5.9
Bronchitis 106	1		1	0.4	0.8	1.7
Pneumonia, all forms 107-109	53	19	34	22.3	32.0	27.3
Diarrhea and enteritis (under two) 119	37	21	16	15.6	15.6	11.8
Diarrhea and enteritis (two and over) 120	11	7	4	4.6	1.7	3.4
Appendicitis 121	14	12	2	5.9	5.0	6.7
Hernia, intestinal obstruction 122	9	1	8	3.8	5.9	4.6
Cirrhosis of the liver 124	11	8	3	4.6	5.5	2.9
Nephritis, all forms 130-132	134	68	66	56.3	65.3	61.8
Diseases of the puerperal state 140-150	14	10	4	22.1	35.7	37.5
Puerperal septicemia 140, 142a, 147	4	2	2	6.3	6.0	14.4
Suicide 163-164	16	15	1	6.7	5.9	5.5
Homicide 165-168	18	4	14	7.6	9.3	9.7
Accidental deaths (exclusive of motor vehicle) 169, 171-195, 201-205, 212-227	98	62	36	41.2	37.9	49.2
Motor vehicle 170	55	42	13	23.1	14.3	18.9
All other known causes	338	201	137	142.1	132.4	135.8
Ill-defined and unknown causes 199-200	125	38	87	52.6	61.5	78.2

**Not available.

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific cause per 100,000 population; from puerperal causes per 10,000 total births.

Arthritis—In considering the surroundings in which an arthritic patient lives, both the physical and mental are important. Is his home well heated and sunny, or cold and damp? Does he dress warmly? Is his place of work detrimental to his health? Since chill, dampness, and exposure are bad for arthritis, often his home and business conditions have to be changed. In some cases a change of climate is advisable. What kind of food does the family habitually eat? Does it consist only of meat, bread and potatoes, or of fruit and vegetables? What are his habits of rest and sleep? Are they sufficient? If not, how can he change them? We all recognize the value of such questions as these in planning our treatment for any patient, but with the arthritic it is vitally important to correct unfavorable conditions as fast and as far as possible.

The mental atmosphere in which the rheumatoid arthritic lives may determine his recovery. After studying fifty cases, Dr. Walter Bauer found that in 66 per cent there was a direct correlation between the disturbing episodes in the patient's life and the flare-ups of his arthritis. In one-half the cases there was unhappiness and frustration in the home. The percentage in my cases was even greater. I found that the unhappy relationship and consequent fear and resentment came from their selfishness and demand. A burst of temper was followed by a flare-up of the joints. Such emotional upsets would undo all the improvement gained by medical treatment. Some change had to take place in the patient and his home-life in order to prevent these set-backs; otherwise ultimate improvement was uncertain and limited.

This is where the "spiritual history" comes in. It gives the foundation on which to start building a new approach to life. Sometimes the patient, often the whole family, needs a change of heart—a new spirit of cooperation and interest. Even though they may not get well physically, as sometimes happens, with a better outlook on life they fit into their environment better, not as a menace but as a constructive force. After treating people in this way for the last twelve years, I am convinced that homes where there is constant friction should be as much our concern as any other part of our medical treatment. Surely this is preventive medicine at its best. It is appalling to realize the number of unhappy homes in America and the amount of sickness of mind and body they are producing. Such homes are also a grave economic problem to the country. The physician who is sincere and who accepts such responsibility can go a long way in producing harmony in every home he visits, for people heed what their doctors says . . . But, in order to guide others, the physician must first have found the answers for himself. Such a physician is a public benefactor in his community. By building moral fibre and spiritual standards in the lives and homes of his patients, he is truly making his greatest contribution to the health of the nation.—*Swaim, J. Indiana M. A., Dec. '45.*

BOOK ABSTRACTS AND REVIEWS

Annual Reprint of the Report of the Council of Pharmacy and Chemistry of the American Medical Association for 1944. Cloth, postpaid, \$1.00. Pp. 238. Chicago: American Medical Association, 1945.

The Council of Pharmacy and Chemistry recently issued the thirty-sixth edition of the Annual Reprint of the Reports of the Council of Pharmacy and Chemistry of the American Medical Association. This volume contains in compact form not only the reports of the Council which have been published in *The Journal* during the past year but also some additional reports which were not considered of sufficient importance to be published in *The Journal*.

The present volume is quite unusual in that it contains not only one report concerning a product found unacceptable. However, there are five reports on the omission of products from New and Nonofficial Remedies, mainly for the reason that they have outlived their usefulness, and in most cases the manufacturers have expressed their lack of desire for continued inclusion of their brands. These reports are: Erysipelas Streptococcus Antitoxin and Antierysipelas Serum Omitted from New and Nonofficial Remedies; Ichthammol Preparations, Isarol, Ichthynat, Ichthyol, Omitted from New and Nonofficial Remedies and Soluble Ichthammol, Not Within the scope of New and Nonofficial Remedies; Iodine Compounds: Iodalbin and Stearodine; Iodo-Casein; Iothion; and Iodostarine; Omitted from New and Nonofficial Remedies; Mercuric Oxy-cyanide, Mercuric Salicylate and Mercuric Succinimide Omitted from New and Nonofficial Remedies and Status of Antimeningococcic Serum and Meningococcus Antitoxin.

This volume is a veritable mine of information on subjects of general interest to the physician, pharmacist and the pharmaceutical manufacture. The reports concern deliberations of the Council on general subjects ranging from the use of the Electron Microscope to the appraisal of new drugs. The report on Pathogenic Bacteria, Rickettsias and Viruses as shown by the Electron Microscope is noteworthy as being pioneer work in this field. The report on the Current Status of Prophylaxis by Hemophilus Pertussis Vaccine was prefatory to the acceptance by the Council on various brands of pertussis vaccines and pertussis vaccine combinations. The valuable and highly informative article on Local Treatment of Thermal Cutaneous Burns reports on the latest and best work in this field.

Essentials of Neuro-Psychiatry. A textbook of Nervous and Mental Disorders. By David M. Olkon, S. B., A. M., M. D., Associate Professor of Psychiatry, College of Medicine, University of Illinois. Cloth. Price \$4.00. Pp. 310 illustrated with 138 engravings. Philadelphia: Lea and Febiger, 1945.

Olkon's book, "Essentials of Neuro-Psychiatry," is truly a book of essentials. In its 310 pages it

covers the field adequately and with ample and thoughtful description of the various topics under consideration. Psychiatry is approached as a study of the individual and due emphasis is placed on the various determinants of personality, such as genetics, nutrition, metabolism, oxidation and physical environment. His concept of intelligence, of behavior, and the unconscious are scientifically sound. He describes the various psychiatric disorders briefly but adequately and illustrates them with numerous well selected case histories. The newer developments in psychiatry are included and quite a number of pages are devoted to the effect of war and Army life contingencies on the behavior and breakdown of the inductee and soldier. For the psychiatrist and practicing physician who want a sound, comprehensive, up-to-date book on the essentials of neuro-psychiatry there is probably no better one available.

Frank A. Kay, M. D.

New and Nonofficial Remedies, 1945. Containing Descriptions of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1945. Cloth. Price, postpaid, \$1.50. Pp. 760. Chicago: American Medical Association, 1945.

Each year a revised list of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association as of January first is published in book form under title of "New and Nonofficial Remedies." The book contains the descriptions of acceptable proprietary substances and their preparations, proprietary mixtures if they have originally or other important qualities, important nonproprietary nonofficial articles, simple pharmaceutical preparations, and other articles which require retention in the book.

Some fifteen or twenty newly accepted preparations appear in the 1945 volume. A large number of preparations have been omitted, mainly brands of official preparations. The general statement concerning these pharmacopoeial preparations has been retained for the information of physicians.

As stated in the preface, the entire book has been scanned to bring it up to date with the latest medical knowledge. It is noted that the section "Articles and Brands Accepted by the Council But Not Described in N.N.R.," a vestigial remnant of which appeared in the 1944 volume, has now entirely disappeared.

This section appeared to have been a catch-all for brands of official articles the acceptance of which the manufacturers desired for reasons of prestige, and miscellaneous preparations which were not necessarily or importantly within the Council's scope and which did not require detailed description. Many of the official preparations have been transferred to the body of the book and the others deleted. One is struck by

the large amount of medical information contained in this volume. Certainly no other compendium of comparable price contains so much.

New Directions in Psychology. Toward Individual Happiness and Social Progress. By Samuel Lowry, M. D. with introduction by Herbert Read. Cloth. Price, \$3.00. Pp. 188. New York: Emerson Books, Inc., 1945.

Lowry's efforts to bring into practical every day utilization our present knowledge of psychology is indeed a stimulating treatise. Lowry, himself a practicing analyst and a doctor of medicine, has a rich background for such discussions. He includes in his discourse such pertinent topics as Marriage, the Emotions of Man, the Government and the Citizen, the Political Man, Religion and Churches, and Educational Fields of Reform. Much of what he says is quite readable. It is not written, however, for the loose reader or the superficial thinker, and its appeal is mainly to the thoughtful and already well informed person.

Though the book contains only 188 pages it needs to be read slowly and with reflection. It should serve to bring the layman, the psychologist, the sociologist, and the physician into closer harmony and understanding.

Frank A. Kay, M. D.

Health Instruction Yearbook, 1945. Compiled by Oliver E. Byrd, Ed. D., Associate Professor of Hygiene, School of Health, Stanford University. Foreword by Walter H. Brown, M. D., Acting Dean, School of Public Health, University of California. Cloth. Price, \$3.00. Pp. 344. Stanford University, California: Stanford University Press, 1945.

Just as newspaper men and allied craftsmen look forward to the once-a-year arrival of their World Almanacs, with its wealth of statistics, digests of government reports and other information to which they can turn in a moment to settle an argument or confirm the accuracy of a statement made by one of their writers, so health workers have learned during the past two or three years to look for the appearance of Dr. Byrd's annual Health Instruction Yearbook. The 1945 edition, now at hand, is the third in what promises to be a long series.

This one is not essentially different from its predecessors except of course in the material it contains, most of which has been prepared since "copy" for those first two was sent to the printers. The arrangement of material under chapter headings, like Nutrition and Health, Infection and Immunity and Chronic and Degenerative Disorders, is the same as before, and, if frail memory can be trusted, the chapter headings themselves have largely been retained without change as assembling points for the brand-new material. The author index and subject index which proved a great help in making use of those earlier editions are also found in this one.

The author index contains three names familiar to Alabama physicians and public health workers. One of the 316 digests of which the book is composed is of "A Preliminary Report on Blood Testing as Required by Alabama Law in the First Three Counties Surveyed," by Dr. D. G.

Gill, Director of the State Health Department's Bureau of Preventable Diseases, Dr. W. H. Y. Smith, Assistant Director of that Bureau and Director of the Division of Venereal Disease Control, and Dr. Samuel R. Damon, Director of the State Health Department's Bureau of Laboratories. The article appeared originally in *Venereal Disease Information* for November, 1944.

With access, in one way and another, to practically everything worthwhile that is published and much that is not published in the public health field—medical journals, government publications, health department booklets, radio talks, etc.—Dr. Byrd experienced no lack of material. Actually, he tells us, he "analyzed" 1,421 different articles, which, by a system of simple arithmetic, means that he selected and used about 22 out of every 100 that came within his editorial reach. There is no way of passing judgment on those that were not used, but those that were represent a good cross-section of public health and medical literature. Whether one begins at the beginning in the orthodox fashion and reads through to the end or jumps about as his fancy dictates, he is certain to learn a great deal about what is going on in this broad, rich field of life-saving.

John M. Gibson

Trend of Medicine—The social security amendments of 1945 are a direct challenge to the medical profession, and must be dealt with on the basis that the citizens of our country need re-education on the progress which has been achieved under our present system of independent practice. However, our profession must keep in step with the changing points of view, and must attain a unity of opinion and expression, for a voluntary means of prepaying the cost of catastrophic and extended illnesses. It is our responsibility to lead the way, to formulate a program that is acceptable to both the majority of the people and the majority of the physicians, or the politicians will surely enact some form of drastic socialistic legislation that will be hopelessly unsatisfactory to both the profession and the public.

The problem of meeting the demands for more adequate medical care is a combination of both economic and social issues. It is undoubtedly true that in some localities medical service is inadequate, and a grave social issue results; but in the majority of these areas the origin of the problem itself is directly traceable to economic deficiencies. If the social issues are to be met, the economic deficiencies from which they arise must be dealt with first in a very substantial way. Most of the areas in which medical care is inadequate are distinctly rural; hospital facilities are lacking, and the economic level of these areas does not invite the highly trained professional man to bring his talent to this community. A forward step to meet this aspect of the problem would be the establishment of diagnostic clinics and treatment centers which radiate from a centrally located general hospital.—*Mastin, South. M. J., Jan. '46.*

AMERICAN MEDICAL ASSOCIATION NEWS

**TRICHINOSIS PRESENTS GREAT PROBLEM
IN AMERICAN CITIES**

Trichinosis, a disease which is caused by a tiny worm derived from the hog, presents a greater problem in the United States than in any other country in the world.

S. E. Gould, M. D., of Eloise, Mich., writing in the December 29 issue of *The Journal of the American Medical Association*, estimates that each American consumes, on the average, three servings of trichinous pork each year. Since the average length of life of Americans is 64 years, he estimates further that each American will consume 200 meals of trichinous pork during his lifetime.

Dr. Gould says that it is not surprising then that "at least 16 per cent of Americans are found at autopsy to have been infected" with the worm.

Man usually is infected by eating raw pork containing cysts enclosing live trichinella larvae. The larvae pass into the small intestines, where they develop into adult worms. The females penetrate the intestinal wall and there bring forth embryos, which are carried by the blood stream to the muscles, where they develop into larvae. In well-marked cases, nausea, vomiting, colicky pains and diarrhea appear on the second or third day. When the parasites invade the muscles a week or 10 days later, there is acute inflammation, manifested by pain and soreness, swelling of the face, profuse sweating and fever somewhat resembling typhoid fever.

Dr. Gould says that the hog becomes infected primarily from eating scraps of trichinous pork present in garbage. The incidence of trichinosis among hogs in the United States during the past 50 years has remained practically unchanged at a level of approximately 1.5 per cent.

"Since only about 70 per cent of the pork is produced in plants under federal inspection and since in such plants it is only the processed products that may be expected to be free from viable (living) trichinae," Dr. Gould writes, "the larger part of the total American pork supply which reaches the kitchen is open to the danger of carrying live parasites.

"The consumer assumes that the pork that he eats is a safe food, but he is seldom aware that it is actually free from living trichinae. Furthermore, the consumer may knowingly or unknowingly eat pork that has been placed in certain meat products, such as frankfurters, hamburger, sausages, meat loaf and chop suey, which he purchases either in the butcher shop or the delicatessen store or in the restaurant, and if such meat products have been insufficiently cooked or inadequately processed he may run the risk of acquiring trichinosis."

Dr. Gould says that the prevention of trichinosis in man consists essentially in the elimination of the disease from hogs. Statistics show that in the United States more than 14,000 hogs per million were found trichinous, compared with only seven hogs per million in Copenhagen.

Dr. Gould advances three methods for controlling trichinosis: (1) microscopic inspection of pork ; (2) cooking of all garbage fed to hogs and (3) processing of all pork prior to its ultimate sale.

Microscopic inspection, *The Journal* article says, has never been applied in the United States to pork consumed in this country. A theoretical objection has been raised that the method is not practical since it is too time consuming for present high-speed American requirements, but the author counsels: "If the method of microscopic inspection should be instituted in the United States for the control of trichinosis, it is safe to assume that suitable devices for a sufficiently rapid examination of the meat would soon be developed."

The second plan of control, that of cooking garbage which is fed to hogs, has been adopted in Canada, England, the Hawaiian Islands and the states of Kentucky, Oregon and New York. Difficulties in enforcement, the author says, have rendered the law ineffective in all three states.

The third possible method of control is treatment by methods of freezing, cooling, smoking, curing or other means according to federal specifications. It is proposed that the federal government enact legislation which will require all pork for interstate shipment to be so processed.



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Miscellany

NEW DRUG HAS DRAMATIC EFFECT UPON PATIENTS WITH EPILEPSY

A new drug, Tridione, is destined to remove the blighting effect of epilepsy on the normal growth and education of many children, according to William G. Lennox, M.D., Boston.

Writing in the December 15 issue of The Journal of the American Medical Association, Dr. Lennox, who is associated with the Department of Diseases of the Nervous System, Harvard Medical School, and the Children's Hospital, said "Tridione, in my experience, has been the most dramatic in its effect of any form of therapy attempted." Out of 40 patients, 11 or 28 per cent were freed from epileptic seizures, 21 or 52 per cent experienced a 75 per cent or greater reduction in the number of seizures and 10 or 20 per cent were helped moderately. Treatment was discontinued in two cases. The author stated that "none failed to experience some amelioration of seizures."

Disappointing results have usually been derived from previously accepted treatments. Some were effective in giving temporary or partial assistance in the control of epilepsy but none equaled Tridione in its action. This drug abruptly decreased or wiped out the seizure in a period of days or weeks and after only temporary treatment it produced lasting effects in some cases.

There are three types of seizures which the author says "are most likely to benefit from this new medicine." The first, petit mal, is a transient lapse of consciousness, the second, myoclonic epilepsy, is a single quick contraction of muscles, and the third, akinetic epilepsy, is a sudden loss of postural control.

According to Dr. Lennox these seizures have a number of characteristics in common, "great frequency, brevity of attacks, abrupt onset and termination, maintenance of mentality . . ." It has been the author's experience that "patients with pure petit mal seem unusually bright."

Since the effect of Tridione treatment of epilepsy is still being investigated, it is not yet on the market. Some unpleasant side

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effects have been noted, namely a skin rash and an unusual sensitivity of the eyes to bright daylight. The author added, however, that pleasant reactions included an improvement in appetite and gain in weight by some patients. "In others the disappearance of clinical symptoms has been marked by an improvement in the school performance or in the deportment of the child."

Recently, the author was instrumental in devising methods for recording the electric disturbances that constantly occur in brain and nerve tissue. These records are known as electroencephalograms. In normal people these records show rhythmic waves with certain variations; in the epileptic there are definite changes from these both in rate and amplitude of electrical disturbances. For example the petit mal form of epilepsy shows an alternating fast and slow rhythm. The electroencephalogram is now being used in the diagnosis of epilepsy. From the studies made a new definition of epilepsy has been derived—it is an expression of the improper functioning of the rhythm-regulating mechanism of the brain.

**ROUTINE LARGE SCALE TESTS URGED FOR
NEGATIVE BLOOD FACTOR**

Routine large scale testing of blood can save the lives of many persons resistant to the Rh negative factor in blood transfusions, according to the report of three investigators in the December 15 issue of The Journal of the American Medical Association.

Major Leslie H. Tisdall and Captain Donald M. Garland, Army Medical Corps, with the technical assistance of Evan L. Durham, New York, explain the ease with which Rh testing can be conducted. Examination of

the blood is made by using either anti-rhesus, immune serums prepared in rabbits and other animals, or standard anti-Rh serums from human beings.

The stock anti-Rh serum is mixed with a drop of undiluted red blood cells on a slide divided into squares. This slide can accommodate 50 tests simultaneously. If within a minute a clot is formed by the mixture then the blood is Rh positive but if it remains in liquid form it means that a breaking down of the red blood cells has occurred and the blood is Rh negative.

The Rh substance is a complicated protein found within the red blood cell. It is made up of several sub-groups and is inherited. Approximately 14 per cent of the white population is Rh negative according to the authors.

A reaction which may bring death occurs when an Rh-negative individual receives transfusion of Rh-positive blood. A pregnant woman who has Rh-negative blood may have a stillbirth or give birth to a child who will die within a few hours if the husband and baby should have Rh-positive blood. An anti-serum is formed in the blood stream of the mother which kills the child under this circumstance. This disease is known as "erythroblastosis of the newborn"—a disease in which the red blood cells are abnormally destroyed.

**INFECTIOUS COLON DISEASES SUCCUMB
TO SULFATHIAZOLE DERIVATIVE**

A new sulfathiazole derivative, phthalyl-sulfathiazole or sulfathalidine, has been found to be superior to other drugs in the treatment of infectious diseases of the colon, according to Michael R. Streicher, M. D., of Chicago.

Writing in the December 15 issue of The Journal of the American Medical Association, Dr. Streicher, who is Assistant Professor of Medicine at the University of Illinois College of Medicine, said that his experience led him to believe that this drug, taken by mouth, was less poisonous and more effective in arresting the growth of bacteria "than any intestinal agent used previously."

The author treated 100 patients with this drug, 80 of whom had chronic ulcerative colitis. The others were suffering from other infections of the colon. Dr. Streicher wrote that with sulfathalidine treatment of the 100 patients under study, 84 demonstrated good results, six showed fair results and 10 patients showed poor reactions to treatment.

Chronic ulcerative colitis is a disease marked by numerous ulcerations in the colon; it has a chronic course with periods of abatement of the symptoms and then periods in which the disease increases in severity. It usually affects young and middle-aged adults. The symptoms are abdominal cramps, fever, and weakness. As time goes on there is progressive emaciation, anemia and weakness and the blood pressure falls.

DUST AND FUMES PRESENT GRAVE PROBLEM IN BERYLLIUM PLANTS

Dust and fumes from beryllium processing constitutes an industrial hazard which requires preventive measures according to an article in the December 15 issue of The Journal of the American Medical Association.

H. S. Van Ordstrand, M. D., and Robert Hughes, M. D. of the Cleveland Clinic, J. M. DeNardi, M. D., Lorain, Ohio, and Morris G. Carmody, M. D. of Painesville, Ohio, said that during the past four years, 170 cases of poisoning were seen among workers in three plants producing beryllium, its compounds and its alloys.

Beryllium production is expanding steadily. Of great importance is the beryllium copper alloy, which is corrosion resistant, nonrusting, nonsparking and nonmagnetic and has good electrical conductivity, high strength and excessive fatigue resistance. It is used in precision instruments, altime-

ters, airplane pipe lines, carburetors, telephone switchboards and a host of other articles.

The doctors found that the skin reaction to beryllium caused inflammation at the point of contact and skin ulcer. These symptoms were found in 42 patients. The most severe reactions occurred on the exposed portions of the body—hands, arms, face and neck.

Another manifestation of beryllium poisoning was inflammatory changes of the respiratory tract, leading to a mild form of pneumonia called chemical pneumonitis. Out of 38 patients, five died as a result of this chemical poisoning of the lungs.

The chances of exposure to beryllium are fairly numerous since it may be encountered during practically all stages of beryllium production. The doctors wrote: "In our patients clinical manifestations occurred only after exposure during processing of the ore, and cleared completely when proper precautions were observed or when work was terminated. The disease was not limited to men in one type of work or in one phase of production; it occurred in maintenance men, in furnace tenders and in workers with distillation and electrolytic processes. Incidence and severity were proportional to the degree of exposure and chemical irritation of dusts and fumes."

In the decomposition of beryl, beryllium compounds such as fluoride, oxyfluoride, sulfate, carbonate, and oxide are produced. The authors state that "in this study patients employed in the sulfating and the oxyfluoride process showed the highest incidence of the disease."

"Elimination of fumes and dusts at all stations is necessary to control the disease. Of equal importance is prevention of accumulated dusts on floors and rafters. In all three plants the incidence dropped considerably after proper exhaust fans were used to remove fumes, after protective shields were placed around furnaces and after general housecleaning measures were strictly observed. Protective clothing, air masks and even gas masks were also instituted for those directly concerned with the processing. . . . The results indicate that preventive measures can control the disease."

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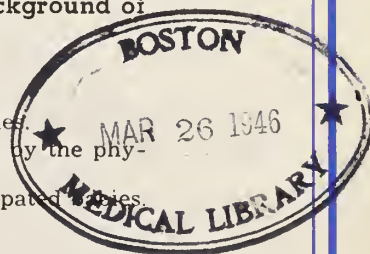
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A CONSIDERATION OF THE PATIENT AND HIS DISEASE

FIVE CASE REPORTS

E. DICE LINEBERRY, M. D.
Birmingham, Alabama

The purpose of a physician should be not only to prolong the life of the individual but to assist him in the attainment of a better physical, mental and emotional state. Organic disease, nervous disorders and deficient nutrition frequently accompany one another. To attain a position for giving maximum aid the physician must properly evaluate the various causes of the patient's disability. This is not always an easy task.

The case history ranks first in importance among the various diagnostic procedures. History taking requires much time and perseverance and is, therefore, frequently inadequately done. Without a careful inquiry into the social life, the dietary habits and emotional reaction of the individual no history is complete. This phase of the history has its greatest importance when dealing with chronic ailments.

The comparatively small number of patients with acute illnesses who consult physicians usually offer but little difficulty in diagnosis and are refreshing to treat. The history is brief, the patient agreeable, the family sympathetic and cooperative, and the proper management not difficult to formulate. This group unfortunately makes up less than ten per cent of the average physician's practice.

Many of the chronic diseases are clearly incurable and progressive. In such instances the physician's only service can be to make the individual's remaining days more comfortable and happy. It may also become his duty to dissuade the family from spending useless sums of money in a futile search of a miraculous cure.

Other chronic diseases are self limited or are so slowly progressive as to be compatible with long life. Attention to proper diet and other measures to promote better general health may give definite benefit. The avoidance of toxic or habit forming drugs should receive attention.

For a few of the chronic diseases, such as diabetes mellitus, peptic ulcer, heart disease, arterial hypertension, pernicious anemia and pulmonary tuberculosis, a fairly well defined course of management can be formulated. Such diseases frequently demand radical changes in the mode of living and dietary habits of the individual. Persons with peptic ulcer or diabetes mellitus are inclined to err in following a rigid regimen sporadically rather than to adhere to a somewhat more liberal one continuously. They are inclined to forget the role that their general health plays in the progress of their disease. Persons suffering from pulmonary tuberculosis are usually over optimistic and are inclined to attempt to overcome their disease by forgetting about it, while persons with organic heart disease are frequently so pessimistic regarding their outcome as to feel it useless to rest and take proper care of themselves. This applies particularly to active, middle aged men who suddenly develop symptoms of coronary heart disease. Diabetic children and young adults usually adhere to a prescribed regimen much better than their seniors.

Physicians are too frequently responsible for many of the ridiculous things that victims of chronic diseases do. Every physician

has heard the following fallacies of unknown origin. "Red meat is bad for high blood pressure and chronic kidney ailments, backache often being the only sign or symptom of the latter. Orange juice is too acid for the keeper of a peptic ulcer. Diabetics can eat no sweets except honey. Sweet milk is constipating. A coated tongue denotes biliousness which demands calomel or bile salts."

When dealing with the functional diseases an attempt at classification for the purpose of prognosis or expected response to treatment is useful. The term chronic nervous exhaustion is applied to that large group of individuals who become unhappy and inefficient as a result of too many responsibilities, overwork or emotional strain. Assurance that no organic disease exists, a short vacation, followed by a few minor adjustments in their mode of living, will restore them to happiness. The inadequate personality group comprises those individuals who are not endowed with enough physical and moral stamina to meet the ordinary demands of civilization. They require a variable amount of protection throughout their existence. Some are almost wholly and hopelessly inadequate. A third group, the psychoneurotics may become equally hopeless. These individuals have an almost fixed idea that they are suffering from some serious organic disease and too frequently cannot be convinced otherwise. They are willing to spend large sums of money and frequently undergo numerous needless operations in their search for health. The major psychoses, dementia precox, manic-depressive psychosis, paranoia and dementia paralytica, will not be discussed, except to call attention to the fact that drug and other toxic psychoses are frequently difficult to differentiate from them.

No satisfactory explanation has been given for the relatively greater frequency of pellagra and other nutritional diseases occurring south of the Mason-Dixon line as compared to other parts of the United States. No doubt, economic conditions are a factor but the question cannot be explained entirely on this basis. Pellagra rarely occurs in families who consume liberal amounts of milk, eggs and lean meats. It is possible that inadequate means of properly preserving these foods in a hot climate

prior to the advent of electricity has tended to develop a distaste for them. One encounters many families who eat few eggs, use a small amount of milk and serve meat only once or twice each week. Even when these foods are readily available it is difficult to persuade them to change their dietary habits for long. Consequently, they tend to relapse into a state of nutritive deficiency.

Discomforts from emotional disorders are as real and often more vivid than the pain of organic disease. A hysterical individual is in no sense a malingerer and should not be treated as such. He becomes justifiably incensed if told that his pains are imaginary. He should receive sympathy and kindness mixed with a large portion of frankness and steadfastness. Neither should he be blamed for the entire show. A good theatrical performance requires a leading lady, co-stars, a director and a sympathetic audience. All should be given proper credit.

Five cases will be reported which were in many respects similar but etiologically different.

REPORT OF CASES

Case 1. A white man, aged 39 years, a linotypist by trade and a World War I veteran, was admitted to the Norwood Hospital December 7, 1938 complaining of inability to take food because his "gastro-intestinal tract was paralyzed" and inability to drink water because "it would not leave his body."

He had developed a hopeless outlook on life and was not fully cooperative, which made it difficult to obtain a reliable history. He had had an exploratory laparotomy in 1924 for suspected acute intestinal obstruction. He had continued to conduct a profitable business until 1935 when he became emotionally unstable and relied on whiskey and bromo-seltzer to keep going. As many as six bromo-seltzers were taken daily. After 1936 most of his time had been spent in various Veterans' Hospitals. His lowest known weight during this time was 79 pounds. Opiates were administered freely for abdominal pain and phenobarbital for insomnia. When admitted to the Norwood Hospital, December 1938, he complained continuously of abdominal discomfort and of burning and urgency of urination. He insisted that he could not perspire or form urine regardless of the amount of water taken and that no food would pass through his gastro-intestinal tract. He did not appear concerned about the fact that he had not walked for two years.

He was markedly emaciated, the weight being 103 pounds and height 6 feet. He was well oriented and mentally clear on subjects not related to his health. He could not walk be-

cause of weakness and disuse contractures of the leg muscles and tendons. No other significant abnormal physical signs were noted. There was pyuria grade 2, but other laboratory studies, including blood studies, analysis of the gastric contents and radiograms of the gastro-intestinal tract, revealed no abnormalities. A urologic consultation was obtained from Dr. J. M. Townsend who found a bladder capacity of six ounces, with pain and other evidence of a low grade cystitis and prostatitis. The working diagnosis was (1) profound emotional instability, probably aggravated by toxic drugs, (2) vitamin and food deficiencies, and (3) chronic prostatitis and cystitis.

Sulfanilamide was given for the urinary tract infection, which promptly cleared. He was convinced that he could take food and water by making him do so. Mild sedatives were given for a few days, thereafter sterile water hypodermically for pain and sodium bicarbonate in capsules for insomnia. A liberal diet was supplemented with niacin and thiamine. The legs were massaged and the contracted tendons stretched. After twenty-four days of hospitalization, he was still complaining of considerable abdominal pain but he had become convinced that he could regain his health and was permitted to return home.

Within six months after leaving the hospital he had resumed complete charge of his business and was even giving moral support to his wife who had become emotionally upset after the long strain of caring for her invalid husband and his business. His weight increased sixty pounds within one year. No major relapses have occurred after seven years.

Case 2. A white woman, aged 57 years, a housewife, was admitted to the South Highlands Infirmary complaining of inability to walk or feed herself because of weakness, arthritis, and inability to retain food. She had been practically an invalid for 16 years, had not walked for 4 years, had not fed herself for 1 year, and for 8 months had had recurring attacks of severe headache, accompanied by convulsive and unconscious seizures. Fairly large doses of phenobarbital were taken for insomnia and codeine and other drugs for pain. She had fixed ideas regarding her inability to take food and was sure that she had cancer of the stomach.

On physical examination she appeared markedly undernourished, weighing approximately 65 pounds. The few remaining teeth were badly diseased and the gums bled easily. The tongue was red and slick. The right wrist was moderately red, slightly swollen and quite tender. There was pain on motion of most of the other joints. The muscles and tendons of the hands, arms, shoulders and legs were markedly contracted. She made no attempts to turn herself in bed or to feed herself. Examination of the blood and urine, including blood Wassermann and Kahn tests, revealed essentially normal findings, the hemoglobin estimation being 84 per cent and the erythrocyte count 4,640,000. No abnormalities could be demonstrated on fluoroscopic examination of the esophagus and stomach. This examination, however, was unsatisfactory be-

cause she could not stand up or lie in a prone position.

A high caloric, high vitamin, high protein diet and large doses of parenteral liver extract, thiamine and niacin were administered. The various joints were manipulated daily and attempts made to stretch the contracted tendons. After a week, we were able to place her in a tub of hot water twice daily. The decayed loose teeth were extracted, sodium pentothal anesthesia being used. Most of these activities were met with bitter protests by the patient. Nineteen days after admission to the hospital she was resting without drugs and taking liberal amounts of food and retaining it. She was permitted to return home to the care of her son, who is a registered nurse. To his patient understanding and perseverance in forcing her to eat and to carry out other prescribed measures should be attributed the remarkable degree of improvement.

Eight months after dismissal she was able to walk with the aid of one crutch. Slight contractures of the muscles of the legs persisted but there were no other signs or symptoms of arthritis. The weight had increased 30 pounds. Brief periods of mental depression recurred occasionally, and some supervision regarding her food was required. Nevertheless, she was doing light house work successfully instead of being wholly a burden to her family. The following five years were uneventful. Six years after the first admission hemiplegia developed which she survived a few days. Autopsy was not obtained. The clinical diagnosis was cerebral hemorrhage.

Case 3. A white woman, aged 43 years, a housewife, was admitted to the Norwood Hospital complaining of severe rheumatoid arthritis of twelve years duration and chronic ulcers on the legs and arms. The arthritis began in the thumbs. After a few months, practically all of the joints of the extremities had become involved. The teeth and tonsils had been removed with no improvement. Barbiturates, salicylates and codeine were taken almost daily for the relief of pain. The first ulcer had developed on the left leg five years previously. Since then ulcers had continued to develop on the arms and legs, several months being required for them to heal. These lesions began as tender, purplish, depressed areas and ulcerated after a few weeks. Her husband had died one year previously from agranulocytosis, but in spite of her many misfortunes she had remained agreeable and cheerful.

She was moderately pale but fairly well nourished. There was marked deformity and distortion of practically all of the joints, except those of the spine. The feet and hands presented the most deformity. She managed to feed herself in spite of almost complete loss of function of the fingers. There was a chronic ulcer on the right arm, 3 cm. in diameter, with depressed margins. There were other depressed indurated areas, apparently due to loss of subcutaneous tissue, which had not advanced to ulceration. The hemoglobin estimation was 68 per cent and erythrocyte count 3,600,000. Other laboratory findings were not significant.

Our diagnosis was (1) chronic atrophic arthritis, (2) unexplained cutaneous ulcers, probably morphea, (3) secondary anemia, and (4) mild nutritive deficiency.

Restoration of joint function was not hoped for but measures were instituted to improve her general health, to promote healing of the skin lesions, and to hasten the progress of the arthritis through the painful stage.

The ulcer was treated with dry dressings and heat. Liberal amounts of food were given, along with large doses of thiamine, cod liver oil, brewer's yeast, parenteral liver extract and ferrous sulphate. Gold sodium thiosulphate was given intravenously twice weekly. Only slight progress had been made at the time of dismissal, three weeks after admission. The above therapy was continued by her family physician, Dr. E. T. Brown. She returned for observation ten weeks later. She was still an invalid, but her general appearance had improved markedly. No drugs were required for sleep or for relief of pain. The cutaneous ulcer was one-half its previous size and no other lesions had broken down. The appetite was good. The hemoglobin estimation was 80 per cent and the erythrocyte count 4,040,000.

Case 4. A white female, age 27 years, single, was admitted to the Norwood Hospital July 27, 1944 complaining of smothering and profound weakness. Ten years previously she had been told that she had heart disease by a heart specialist and had not walked since. Unconsciousness had occurred after each of eight attempts to sit up in bed during this period. She had continued to read and carried on a voluminous correspondence through contact with Shut-in Clubs and similar organizations. Conversation brought on extreme smothering and weakness. Consequently, the history had to be taken in several sittings.

The mother was of the opinion that her daughter's illness really began prenatally because the mother had felt worse during this pregnancy than with her former two pregnancies. According to the mother, the daughter had been critically ill with most of the common childhood diseases. Unconsciousness occurred for a few days during an attack of influenza at the age of three years. She was critically ill with measles. The first smothering spell occurred soon after the tonsils were removed at the age of ten years and occurred frequently thereafter. At the age of twelve years backache came on while stooping to pick up her slippers and required bed rest on pillows for three weeks. Six months later while chopping cotton she experienced a peculiar feeling which was accompanied by a numbness in the left foot. The left side of the face and left thumb became drawn and there was no feeling in the left leg for one week. Menstruation occurred uneventfully at fifteen years of age. At about this age, one week after recovery from a severe attack of influenza, she developed severe smothering and was confined to bed for nine weeks. Climbing steps or sweeping the floor caused marked weakness and trembling thereafter. While attempting to pick cotton a few months after the

attack of influenza, she had a spell characterized by blindness and inability to breathe. A heart specialist was then consulted who advised that she had myocarditis which would ultimately prove fatal, and that the more completely she rested the longer she would live. She was then 16 or 17 years of age. She remained in bed in a prone position until she came to us ten years later. To make her a happy invalid became the primary endeavor of the family, particularly the mother. She promptly became fat and was kept amused by a host of friends. She managed to type letters a few lines at a time.

She was extremely obese with soft, clear skin and good color. The muscles were weak and flabby. There was no limitation of motion in any of the joints. When raised in bed for the purpose of examining the back she became limp and feigned unconsciousness. There was moderate tachycardia but a careful physical and neurologic examination revealed no other evidence of organic disease. Electrocardiogram and radiograms of the lungs and heart were within normal range.

We were of the opinion that her troubles were entirely functional. The father accepted this opinion readily but the mother insisted that we would kill her daughter if we forced her to get out of bed. After much coaxing and persuasion she was sitting up for her meals and taking a few steps about the bed each day at the end of two weeks. Because she was extremely obese and because her feet had not borne weight for ten years she developed marked soreness and some swelling of the feet soon after she began using them. She was permitted to return home at the end of three weeks.

Five months later she was seen in the Norwood Clinic. She had developed fairly firm muscles and was walking a few miles each day but was still complaining of smothering. Neither the patient nor the mother had been fully convinced that she had been suffering from a nervous disorder rather than an organic disease.

Case 5. A white female, married, age 34 years, was admitted to the Norwood Hospital on January 23, 1939 complaining of spitting up food and losing weight for one year. She had always been of a nervous disposition and underweight. The maximum weight for life was 115 pounds.

On physical examination she was found to be extremely nervous and undernourished, the weight being 79 pounds. No abdominal masses or lymph nodes were palpable. Other physical signs were not significant. The hemoglobin estimation was 77 per cent and erythrocyte count 3,340,000. There was an absence of free hydrochloric acid in the gastric juice after histamine stimulation. The patient brought with her reports of x-ray studies of the gastro-intestinal tract made elsewhere recently by a competent radiologist. These studies had revealed negative findings except for generalized visceroptosis. Because of limited finances she was permitted to leave the hospital after four days. Her family physician was advised to treat her for nervous vomiting.

She was readmitted to the Norwood Hospital one month later. At this time an attempt was

made to feed her by stomach tube but the tube could not be passed beyond the cardiac end of the stomach. Further x-ray studies were then made which revealed almost complete obstruction of the lower end of the esophagus. The smooth dilatation of the esophagus gave the appearance of cardiaspasm rather than of a new growth. Esophagoscopy studies gave no additional information. A stomach tube was passed into the stomach through the esophagoscope and left in place for the purpose of tube feeding. This was carried out fairly successfully for one week, at the end of which time she developed signs and symptoms of peritonitis and died two weeks later, 27 days after the last admission and 51 days after the first.

Autopsy revealed generalized peritonitis, which was probably the immediate cause of her death. There was scirrhous carcinoma of the stomach (linitis plastica) with metastases to the regional lymph nodes, pancreas, liver, left adrenal and esophagus. The metastases to the esophagus had obstructed the cardiac end of the stomach.

DISCUSSION

The five cases reported have many common features but a careful analysis reveals them to be fundamentally different. Case 1 is that of a fairly stable individual who became emotionally upset, whiskey and drugs followed, ending in a real psychosis and food and vitamin deficiencies. Since he improved so rapidly and so completely after the drugs were discontinued and food and vitamin administered, it seems reasonable to assume that he was suffering from a toxic psychosis. However, manic-depressive psychosis cannot be entirely excluded.

Case 2 is that of an individual who has always been emotionally unstable and always will be. When assistance is completely withdrawn, she will relapse. She also presented many signs of nutritive deficiency. The sore, red tongue and tendency toward recurring attacks of diarrhea suggested mild pellagra. The bleeding gums and painful, swollen left wrist suggested scurvy. These signs promptly disappeared when food and vitamins were administered. She died at the age of 63 years of a brain lesion which apparently was not primarily responsible for her emotional instability but may have been a factor during her later years.

Case 3, in marked contrast to 1 and 2, is that of a stable individual who developed a chronic painful crippling disease from which there was but little chance to recover. During the course of this disease she developed anemia and a poor state of nutrition. Attention to her general health changed her

from an invalid who could not sleep because of pain to a comfortable invalid. We are of the opinion that the administration of vitamins and proper diet were the major factors in relieving the pain. However, the gold sodium thiosulfate may have been partly responsible for this.

The role played by relatives, friends and physicians in developing a state of hysteria is emphasized in Case 4. Utmost care should be exercised in making a diagnosis of hysteria. It should be established on positive evidence obtained largely from a careful history. The approach should be to find organic disease, if it exists, in addition to the functional disturbances and to properly evaluate each as a cause of disability in that particular individual. The error in diagnosis made in Case 5 was more humiliating to the physician concerned but the error made in Case 4 did infinitely more harm to the patient.

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There is nothing desirable to which a man cannot attain provided he is willing to work and sacrifice enough for it. This opinion is the fruit of experience. Please excuse for a little the use of the personal pronoun, and for my indulging in a bit of autobiography which, while not particularly creditable, for in some ways it appears quite stupid and stubborn, may serve to illustrate a point.

For years as a youth I had assumed without much thought that I would be a surgeon as my father had been. However, as the time approached for entering medical school it seemed to become less and less desirable. I was fearful of all those things connected with the study of medicine which are thought so dreadful by the uninitiated but become so relatively simple and natural in their accomplishment. Finally it got to the point where, in my imagination, a medical education was impossible for me. No one who has not experienced this feeling can picture the torturing conflicts of emotion and indecision which gnawed at the very vitals of heart and soul. I could and would do anything else, but I could not study medicine. I turned to other possibilities including the ministry, but there was no voice from heaven, and always after careful reasoning I came back to the sound conclusion that if I did not turn diffidence into temerity I would forever be a failure.

So with more determination than courage, and with more obstinacy than virtue my medical education began. Naturally, the further I progressed the more fascinating it became and when I was through two things were mine. I not only had a profession of which no one could deprive me, but I was psychologically my own master.—*Jervey, South. M. J., Jan. '46.*

INTRAVENOUS FLUIDS

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One of the greatest advances in the entire field of medicine in recent years has been in the use of intravenous fluids. Also, one of the most widely misunderstood subjects in the field of medicine today is in the use of intravenous fluids. This is due partly to the fact that most of the papers on the subject are written by men so advanced in the fields of physiology and chemistry that their papers are too technical for the less specialized worker, partly to the misconception that the various fluids are used to treat particular diseases, when in reality they are used to correct pathologic chemical conditions which may have resulted from the disease, and partly, it is to be feared, to a certain degree of mental laziness on the part of those using them. This last is exemplified by the fact that the overwhelming majority of all infusions given are either five or ten per cent glucose in physiologic saline, when in actuality neither of these should be administered in any large quantities. They are apparently given on the theory that if glucose solutions are good for some conditions and saline for others that the combination must of necessity be good for all. This of course is about the same as having one's cook decide that if sugar is good in some foods and salt in others the ideal seasoning for all foods should be a mixture of salt and sugar.

Ordinarily the conditions for which intravenous fluids are used fall into four classes, with only a few specialized conditions added. These four classes will be discussed, not from a technical viewpoint but from the viewpoint of one who wishes to know when to administer each type of fluid, and how much to give.

First, in order of frequency, is the supplying of fluid for the ordinary metabolic requirements of the patient. This is equivalent to saying the supplying of fluid for the excretion of nitrogenous wastes through the kidney. This requirement is met almost exclusively by the glucose solutions; five per cent glucose in distilled water by preference, although ten per cent glucose in

distilled water may be used if care is exercised to see that it is administered very slowly, since it is a hypertonic solution. As regards the amount to be given, the body under conditions of basal metabolism excretes about 1500 cc. of fluid each twenty-four hours in the form of vapor from the lungs, moisture in the feces, and insensible perspiration. In febrile conditions this figure of course increases. In addition, the resting individual, in order to eliminate the waste products of protein metabolism, must excrete a minimum of five hundred cubic centimeters of urine per day if the kidneys are functioning at maximum efficiency, and 1500 cc. if the kidneys are unable to concentrate and the urine is excreted with a specific gravity of 1.010. This means that a patient unable to take fluids by mouth but having no fever or excessive perspiration needs an absolute minimum of 2000 cc., and 3000 cc. if one wishes to be safe, of glucose solution every 24 hours. In cases where the metabolism of proteins is excessive, such as in burn cases, and in any case where extra amounts of nitrogenous wastes are to be excreted, as evidenced by a blood nonprotein nitrogen level of more than 40 mg. per cent, even larger quantities are necessary. In these conditions it is completely safe and feasible to administer 5 per cent glucose solutions continuously and at the rate of 120 drops per minute, or about 480 cc. per hour until the nonprotein nitrogen level returns to normal.

Possibly, second in frequency in the uses of intravenous fluids is the relief of clinical dehydration. It has been determined by actual human experiment that for an individual to show the clinical signs of dehydration, such as dryness and loss of elasticity of the skin, and softness of the eyeballs, he must have lost the equivalent of at least six per cent of his body weight in normal saline solution. This is the minimum, and of course more may have been lost. Now, the kidneys are capable of excreting in a day twenty-five grams of salt, or approximately the amount contained in 2500 cc. of normal saline solution. Therefore, in treating a patient who has the

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clinical signs of dehydration, one should attempt to give during the first twenty-four hours enough saline solution to exceed six per cent of the body weight by about 1500 cc. In the case of an individual weighing 155 pounds this would be approximately 5700 cc. However, as an additional safeguard, it is well to check each urine specimen for the presence of salt by the addition of a little silver nitrate solution, and, when excretion of salt begins, to discontinue saline for the day. An important exception to this rule occurs in the presence of mercury poisoning, where the kidneys lose the ability to retain necessary salt in the body, and large quantities of saline must be administered continuously. Other than in mercury poisoning, however, the administration of saline in quantities exceeding 2500 cc. per day must be done with great caution, because of the danger of generalized edema, and particularly pulmonary edema. During his internship the writer assisted at the autopsies of two individuals who had been literally drowned by the injudicious use of a large quantity of saline.

The supplying of nourishment to those unable to take it by mouth is another important phase of intravenous infusion. However, five per cent glucose solution supplies about one calorie per cc., and ten per cent glucose supplies two calories per cc., so that three to six thousand calories per day will be derived from the administration of the 3000 cc. of glucose advised above. Where the individual is to subsist on intravenous feeding over long periods it is well to supplement this by an occasional flask of Ringer's or Hartmann's solution for the minerals contained, and to give protein either as amino acids, plasma or whole blood.

The fourth important phase of intravenous fluid administration is replacement of fluid lost from the body. Didactically, whole blood loss should be replaced as nearly as possible with equal quantities of whole blood. Until whole blood is available, plasma serves almost as well, and saline solution and ten per cent glucose solution in that order may be employed, but are not nearly so satisfactory. Loss of plasma proteins, as in nutritional edema or nephritis, should be restored by the administration of plasma. Loss of plasma, as in burns,

should be restored by the use of plasma also. In the case of extensive burns treated by pressure dressings, it will be found that about eight cc. of plasma for each per cent of the body surface burned will be required every twenty-four hours. In the case of burns, additional large quantities of glucose solution are needed to eliminate the excessive protein waste. However, the specific management of severe burns is an advanced problem in biochemistry and as such beyond the scope of this paper. Where fluids are being lost in excess from the gastrointestinal tract, as in severe diarrhea, vomiting or fistulae (and of course where a Wagensteen suction is employed), these fluids should as nearly as possible be replaced quantitatively by the administration of normal saline, or in the presence of acidosis most or all of the saline may be replaced by one-sixth molar sodium R-lactate solution.

Special uses of intravenous fluids, such as the use of alcohol for the relief of pain, and 50 per cent sucrose for the relief of increased intracranial pressure, will not be discussed here.

SUMMARY

1. The adult who is unable to take fluid by mouth needs 2000 to 3000 cc. of five or ten per cent glucose solution each twenty-four hours.
2. The individual showing clinical signs of dehydration should have a quantity of normal saline equivalent to at least six per cent of his body weight.
3. Nourishment of an individual on intravenous feeding for a short time is adequately cared for by the quantities of glucose recommended. If intravenous feeding is to continue longer, extra minerals, proteins and vitamins must be provided.
4. In general, abnormal fluid loss from the body should be replaced in kind; that is, blood loss by whole blood, plasma by plasma, and other fluids by normal saline solution, although in the last instance sodium lactate solution may be substituted with advantage if acidosis exists.
5. The greatest care should be exercised in the administration of saline solutions, since cardiac failure or drowning is likely to occur if too great quantities are used.

THIOURACIL

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Now that thiouracil has been released and it is available for any physician to prescribe, it seems fitting that it should be discussed in this Journal, and as much knowledge as possible disseminated concerning its use, benefits and dangers.

Having treated more than one hundred very toxic patients with thiouracil during the past two years, we have arrived at certain definite conclusions concerning its use, and also have arrived at certain ideas in protecting the patients while giving them the most benefit from the drug. In these cases, thiouracil was used solely as a means of preoperative preparation.

It has now been fully established that thiouracil, if properly given and maintained, will bring the basal rate of the most toxic goiter patient down to normal, permitting the thyroidectomy to be done safely in one stage. This, of course, is a very desirable thing in that it obviates stage or repeated operations, and minimizes suffering and expense.

There have now been reported more than fifteen deaths from the giving of thiouracil to patients, and undoubtedly more have occurred that have not been reported. We were unfortunate in one of our first cases to have a death, due to excessive dosage and the fact that the patient did not keep in touch with us. The usual cause of death in practically all of these cases has been agranulocytosis, with high fever and septic sore throat.

Many cases which exhibited these symptoms have been cured by the free use of penicillin and other supportive measures. The benefits of thiouracil greatly outweigh the danger, and undoubtedly the danger has now been practically eliminated by safeguards which can easily be applied. However, the drug must not be used indiscriminately and only when a definite diagnosis of hyperthyroidism has been established.

During the past two years, Dr. Stanton M. Hardy, of the Lederle Laboratories, who has had complete charge of this drug during the experimental stage, advised never to give more than 0.6 of a gram daily to a

patient. We have lessened this dose to 0.4 of a gram the past year, and have obtained just as good results with this smaller dosage, and the blood picture has remained much more constant and much safer.

Clinically, the danger signals are sore throat, involving chiefly the submaxillary glands, fever 101-2, and the typical symptoms that go with an acute influenza. If these symptoms develop, the drug should be stopped at once and blood count established. If the leucocytes fall below 4,000, or the polymorphonuclear elements in the differential count fall below 45%, the drug should also be stopped immediately.

This was not applied in two patients who had a blood count of less than 4,000 before taking the drug. We were doubtful about giving them the drug, but watched them very carefully, taking blood counts every four days, and both of them showed marked improvement from a severe hyperthyroidism, and both went on to a successful operation and cure.

White blood counts should be taken every five days, and if explained to patients, even if they live at a distance, they will cooperate and present themselves in order to be safeguarded.

In selecting cases for the administration of thiouracil, we have never given it to any patient with a basal metabolism of plus 20, or lower. These cases with mild hyperthyroidism can be well controlled by iodine, and good results obtained by preparing them that way.

We have made it a practice for the last year to give the patient lexitron or jeculin three times a day, and have the patient eat one yeast cake each day, dissolved in milk or water while thiouracil is being taken.

We have not been impressed with the benefits of pyridoxin (vitamin B₆) although we have given it to many patients. The patient who developed agranulocytosis was taking 75 milligrams of pyridoxin daily.

The Food and Drug Authorities have advised that the drug be administered only as a preparation for operation. This is probably wise at the present time, although Dr. Hardy and others with large experience

feel that certain medical cases have received much benefit from the drug.

We feel that this drug is a great advance in the treatment of toxic thyroid cases; it

is perfectly safe, if the patient is closely watched and the tests made frequently, bearing in mind all the time that this is essential in order to avoid bad results.

THE CLINICAL USE OF DIURETICS

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A diuretic is a drug used to increase the volume of urine. Diuretics have been used for many years. In 1886 Jendrassik reported the use of small doses of calomel as a diuretic from which he got good results.

In this paper I wish to discuss the indications and clinical use of the most effective and commonly used diuretics.

Lyons and Jacobson have classified diuretics according to their action in three groups: 1. Those that increase the serum colloid osmotic pressure (blood serum, whole blood, acacia and hypertonic glucose). 2. Those that increase the circulation particularly through the kidneys, and thus increase the volume of glomerular filtrate (digitalis, xanthines). 3. Those that decrease the reabsorption of the glomerular filtrate (acid-producing salts, potassium salts, urea and organic mercurials).

INDICATIONS

1. Congestive heart failure with or without kidney involvement.
2. Renal disease.
3. Cirrhosis of the liver with ascites.

In the use of diuretics several questions present themselves. When should they be started? Which diuretic should one use? How often should they be given? In what dosage? Which is the most effective? Which is the least toxic? Should they be given by mouth, by suppository, or by injection?

Perhaps these and other questions could best be answered by discussing in some detail the diuretics, as I have used and observed them in the treatment of heart failure, and what I have read. No attempt will be made to review all the literature.

Read before the Birmingham Clinical Club, May 29, 1945.

CONGESTIVE HEART FAILURE

Diuretics find their greatest field of usefulness in heart failure with edema in which there may or may not be kidney involvement. The following routine is practiced by me, varying it to suit each individual case: The patient is put on rest, digitalis, a salt poor diet, with liberal proteins and vitamins as needed, 1000 to 1500 cc. of fluids daily, and sedatives or opiates as indicated. If the edema is slight and there is not much dyspnea, digitalis may be the only diuretic needed. A reduction of sodium chloride is necessary, but in most cases the diet does not have to be salt free. The greater the edema the greater should be the restriction of sodium chloride. In excessive edema I substitute potassium chloride for sodium chloride though patients do not like the taste of potassium very well.

Many of these heart cases do not get enough protein. It is therefore important that plenty of eggs, milk, cheese and meats be given. A marked reduction in protein is not an infrequent cause of edema. If the diets are inadequate I also prescribe vitamin B complex, fortified with extra thiamine. Vitamin C is given if needed for any deficiency. It acts also as a mild diuretic. The majority of patients can take 1500 cc. of fluid or more. All patients with edema should have fluid intake and urinary output measured. Weight charts should be kept. Should the edema fail to clear up on the above routine I then give 4 to 6 grams of ammonium chloride in $7\frac{1}{2}$ grain enteric coated tablets daily. These should be given after meals.

If digitalis and ammonium chloride fail to get rid of the edema and dyspnea in a reasonable time, I resort to one of the organic mercurials, mercupurin or salyrgan-theophylline by vein. The initial dose is

$\frac{1}{2}$ to 1 cc., and the dosage thereafter is 1 or 2 cc. two or three times weekly until the edema is gone. This is followed by an occasional dose as often as necessary to control the edema.

Suppositories: In patients who live some distance away or for any reason cannot be seen frequently, the suppository of mercurin or salyrgan-theophylline is used to a good advantage. Both suppositories are effective, but I have found mercurin less irritating. Neither should be used, however, in the presence of hemorrhoids, fissures, ulcers or other rectal trouble, and in acute nephritis. I have practically discontinued prescribing suppositories since salyrgan-theophylline and mercupurin are available for oral use.

Oral Administration: Clinicians have waited a long time for a potent and effective diuretic that can be given by mouth without toxic effects to the patient. A definite step in this direction has been taken both in the introduction of salyrgan-theophylline and mercupurin tablets. The tablets of salyrgan-theophylline are enteric coated, containing 0.08 gm. of salyrgan and 0.04 gm. of theophylline. The tablets of mercupurin are enteric coated, containing 0.030 gm. mercury and 0.027 gm. anhydrous theophylline. The tablets are more effective than suppositories, as previously reported by Batterman and DeGraff.

The indications for the tablets are where frequent treatments with a mercurial are needed in ambulatory cases, in obese patients, in patients with thrombosed or small veins, and, generally, whenever the injection is objectionable or not practical.

The dosage is five salyrgan-theophylline or mercupurin tablets given in a single dose. It is best given about 8:00 A. M. or earlier, so as to have its effect over as much as possible before bedtime. Smaller doses than four or five tablets have not shown much diuresis in my hands. It seems necessary to repeat the tablets every 4 to 5 days, along with ammonium chloride. About half of the cases show some gastro-intestinal disturbance, nausea, cramping, and, at times, diarrhea. There may be 2 to 4 stools but patients do not usually object to the slight discomfort.

In congestive heart failure with considerable edema I have first gotten rid of the

edema by means of injections, then have switched over to the mercurial tablets. In this way I can reduce the number of injections, and in some cases completely control the edema with the oral medication. In no case have I found any harmful effects to the kidneys from the tablets.

KIDNEY DISEASE

In nephrosis, and low grade subacute and chronic nephritis, diuretics are of distinct aid in clearing the edema. It is safer to give $\frac{1}{2}$ to 1 cc. of diuretic by needle. Frequent examinations of the kidneys should be made and if evidence of kidney damage or nitrogen retention develops the diuretics should be stopped.

If there is a low or fixed specific gravity, a high nitrogen retention, or any other evidence of severe kidney damage, as acute nephritis, diuretics are definitely contraindicated. An increase in the number of casts in the urine is another indication that the organic mercurial should be stopped or the dose reduced.

CIRRHOSIS OF THE LIVER

Diuretics are used in cirrhosis of the liver with ascites. The injectable mercurial should be given along with ammonium chloride by mouth.

I have not found diuretics to be of much value in removing ascites due to cirrhosis. Some observers feel that they can reduce the number of tapings with the aid of diuretics. If jaundice and severe liver damage are present the mercurial diuretics should not be given.

COMMENT

The xanthine bases are excellent diuretics, but given in adequate dosage cause a lot of nausea. They are given to best advantage and cause less nausea if given after meals. They are fairly well tolerated if given 4 or 5 days in succession then resting 2 or 3 days. I use potassium chloride as a substitute for sodium chloride by putting it in a shaker and placing it by the patient's bed.

Urea is a potent diuretic in large doses (60 to 90 grams daily), but is nauseating and unpleasant to take. We have used it for several years at the Hillman Hospital on negro patients, however, and they tolerate it quite well. It should be stopped if the blood urea goes above 20 mg. per 100 cc.

The greatest and most frequent use of diuretics is in congestive heart failure with edema, as already stated.

I have found ammonium chloride in enteric coated tablets, along with digitalis and the organic mercurials, as already outlined, to be the most satisfactory method of administering diuretics.

The organic mercurials should not be used in acute nephritis or in the presence of severely impaired kidney function in acute or chronic nephritis. Frequent examinations (specific gravity, phenolsulphonphthalein tests, and blood chemistry studies) should be made to watch the condition of the kidneys and to indicate, by the findings, when the mercurial should be stopped. It is not necessary to stop the injections on the presence of albumin alone.

At times, one sees patients with an accumulation of fluid in the pleural or abdominal cavity. This fluid should first be removed by tapping, and then resort to diuretics to keep it under control.

Diuretics are helpful in heart failure by getting rid of the edema, improving the patient's condition by relieving the dyspnea, increasing the vital capacity and by decreasing venous pressure.

Not infrequently one sees a patient in heart failure who gets a great measure of relief from nocturnal dyspnea by the use of diuretics both by mouth and by needle.

Friedman, Resnik, Calhoun and Tinsley R. Harrison feel diuretic drugs should be employed frequently for ambulatory patients with heart failure, who have minimal edema or who are suspected of having latent edema.

SUMMARY

This paper has discussed the indications and uses of diuretics, with an outline as to how they are administered.

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Vital Statistics in Public Health—The facts entered on a death certificate quite often do not concur in nomenclature and terminology with the International List of Causes of Death. This, in some cases, causes misclassification. The fact that professional people are notoriously poor handwriters also sometimes makes classification difficult. The greatest inaccuracies in these records, however, are a result of the fact that there is no state law requiring medical coroners in the State of Texas. Justices of the peace usually have some pet cause of natural death which sounds business-like and, of course, mysterious to them. Examples of these are "coronary occlusion," "heart disease," "myocarditis," "arteriosclerosis," and "heart failure," which in itself is unacceptable as a cause of death since it happens in all deaths. It is realized that many deaths now being recorded by justices of the peace would have to be recorded by a medical coroner as "cause of death unknown," unless a postmortem examination were performed. But this would be far better than having the records clouded with an excess of deaths improperly diagnosed as being from diseases of the circulatory system.—*Love, Texas State J. Med.*, Jan. '46.

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HEALTH IN ENGLAND

Just a day or two before that tragic Friday morning in 1939 which saw Europe and eventually almost the whole world plunge into another monster war, persons listening to thousands of radio stations all over the world heard descriptions of the evacuation of children from London. Portable microphones had been set up in the main railway stations, and the announcers told vividly of the scenes being enacted on the long platforms and in the crowded compartments of the trains which had been mobilized for this task. Weeping parents, many of them seeing their children leave them for the first time in their lives, were heard giving parting words of advice and exacting promises to write often. Each child had been tagged with his or her name and destination, so as to be more easily aided in case of accident or getting lost. School teachers and other volunteers were serving as shepherds of this youthful flock, too young to comprehend the tragic significance of impending events and tending to look upon the evacuation as a summer lark. Many an American parent listening in to that broadcast must have felt a lurch at the heart and even a tear as he or she thought what this meant to those English

parents. And there must have been many a silent prayer of thankfulness that their children at least were safe from the dangers from which those London boys and girls were fleeing.

Then there were later broadcasts, each telling about some phase of the war's tragic progress. There were descriptions of bombings, rather mild affairs at first but becoming more and more devastating as the enemy moved his bases closer and closer to the tight little island. There was the "phony war," when life went along almost as usual and mighty armies enjoyed the safety of heavily fortified defense positions. Then came the swift change in the war's tempo, the fall of all of Britain's allies and the spectacle of England once more, as on previous historic occasions, standing alone against a conquering enemy. Then came an intensification of the submarine warfare, and the threat of mass starvation became even more serious than that from bombing. Bomb-shelter life became the accepted thing, and the English mode of living underwent a major transformation. But those brave people of Britain kept relentlessly to their task of surviving their great ordeal, and in time she was joined by new allies with new armies and navies. Then at last victory came within sight.

But what of the England that was not told about in those censored overseas broadcasts and in newspaper dispatches? How did the people fare? How painful did the gnawing hunger become before the tide turned? And particularly how did all those privations affect their health?

There was an answer to some of these questions in a radio interview several weeks ago with Sir Wilson Jameson, K. C. B., chief medical officer of the British Ministry of Health and Honorary Fellow of the American Public Health Association and the Royal College of Physicians of Canada. The writer is indebted to the commercial sponsors of the program for a copy of a volume containing the scripts of that and other broadcasts. Virtually all of the information dealing with health conditions in wartime England used in this article is taken from that script.

During the entire war, it was revealed, more than 60,000 civilians were killed and a considerably larger number—more than

86,000—seriously injured. Of the approximately 534 hospitals in what is known as the London area, no fewer than 225, or more than two-fifths, were damaged by enemy action, some having been hit as many as 20 times by high explosives, while others suffered grave damage from fire raids. From Land's End to the north of that embattled island approximately three and one-half million houses were either completely destroyed or damaged.

London suffered more extensive damage than any other area of comparable size of course, and the air raids and robot bomb attacks emphasized the wisdom of removing those children from the city. It was not difficult to keep them away as long as the bombing was severe, but when it became less intense the homesickness and the yearning to return to familiar surroundings asserted themselves, affecting both the children and the mothers who had accompanied them to rural and less congested districts. At one time there were more than a million and a half women and children in the evacuation centers, but this number kept dropping as more dared the danger of the congested areas. Many were in London and other large cities when the flying bombs began falling, and it was necessary to send about 750,000 mothers and children to the country, including many who had been sent away some time before and had returned.

But women and children were not alone in being removed from the chief target areas. Industries had to be shifted lest they be destroyed and thus cease to produce the weapons of warfare. This brought other armies of civilians to the rural sections. This made it even more necessary for local residents to open their homes to new arrivals. As serious as was the problem of rebuilding bombed-out factories, it had to be dealt with along with other problems growing out of the population shifts, including the construction of new hospitals and maternity homes. Working women, whose labor was imperative in the interest of the war effort, could not keep their jobs unless there were places where they could leave their children. So day nurseries had to be built, equipped and staffed.

And of course provision had to be made for those who remained behind in the cities,

as well as for those in the industrial communities that sprang up all over the country. Air raid shelters were an imperative "must." These ranged from millions of single-family retreats to huge community centers far below the street-level, some containing 8,000 people, or nearly half the population of Decatur. The London subway system became what was perhaps the world's greatest communal dormitory. During the worst of the bombings, Sir Wilson said, about 175,000 Londoners slept there every night.

"Everyone has had to work," Sir Wilson added. "There's been no unemployment problem. By 1944 87 per cent of single women between 18 and 40 were in the armed forces, in civil defense services, or in industry. Seventy-four per cent of childless married women were similarly employed. The armed service demands created an acute shortage of doctors and nurses to care for the civilian population. More than one-third of our doctors are with the Forces. And now (in September 1945) there is only one general practitioner to approximately 3,000 of the population. The hospitals have been hard pressed. With depleted nursing and medical staffs, they've had to treat air-raid and battle casualties as well as their ordinary load of civilian sick. Other factors to be remembered are the great blackout, the overcrowding, the very long hours of work, loss of sleep, the lack of public entertainment at times, transport difficulties, food rationing with its rather monotonous diet and the queues at food shops. Yes, it has been a trying time for civilians in Britain, with most of them worrying over husbands, fathers, sons or sweethearts fighting somewhere or other, in addition to their own hardships."

So much for the living conditions in England at war. What of the effects of those conditions upon the health of the British people? Let us see what Sir Wilson had to say about that:

"In the beginning we had many qualms. It seemed that the stage was set for serious happenings indeed. But what actually did happen? Let's take a look at the vital statistics for England and Wales. The provisional birth rate for 1944 is the highest since 1935. The standardized death rate for 1943 was lower than that for 1938 and 1939,

in spite of the withdrawal of so many healthy young adults from the civilian population. In 1944 the infant mortality rate for England and Wales was 46 per thousand live births and the still birth rate 28 per thousand total births—both the lowest we've ever known."

Sir Wilson gave much of the credit for his country's unusual health record during the war to the special health measures resorted to, particularly those having to do with the health of women and children. Conscious of the additional dangers brought by the war, the public health agencies were on the alert to stop in its tracks any condition which might threaten to bring an epidemic. The only disease which offered such a threat during the approximately six years of war was cerebrospinal meningitis, which tends to become much more prevalent when large numbers of people are in close physical contact, as in air raid shelters, training camps and overcrowded dwellings. Deaths from tuberculosis actually dropped to a record low during the war, although there was an upward trend in both deaths and reported cases in the latter years of the war period. Deaths from diphtheria declined to less than one-third the prewar totals, thanks, we are told, to the nationwide campaign for the protection of children by means of toxoid immunization.

Unfortunately, the picture was not so cheering as far as the venereal diseases were concerned. The realistic truth is that these diseases became a much more serious problem during the war than before, consistent with their traditional tendency to claim a vastly larger number of victims under the impetus of social upsets, the breaking up of families, the loosening of moral barriers and other wartime conditions. Strangely enough in a country as progressive in health matters as England, those diseases are not reported to the public health agencies there as they are here. So the ebb and flow of the venereal disease tide can only be estimated on the basis of the number of cases handled from year to year in the special treatment centers. On the basis of this, it is estimated that specific infections contracted in 1943 in England and Wales outnumbered those contracted in those countries in 1939 by 139 per cent. There is slight encouragement in the fact that the venereal disease infection peak

seems to have been reached in 1943. The 1944 record was somewhat better.

Replying to a question, Sir Wilson elaborated somewhat upon what he had previously said about the reasons for England's unexpectedly favorable health conditions during the most "all out" of all wars. He mentioned the making of special provision for pregnant and nursing mothers and young children in the matter of food, including the plan by which 76 per cent of the children received extra milk rations and two-thirds of the school population received midday lunches at school. He gave much credit to the enrichment of bread with calcium carbonate and the use of 80 or 85 per cent whole wheat flour in its manufacture. He praised the authorities for leaving bread unrationed and thus available in needed quantities to the population generally, in the face of shortages of other foods. The fact that people's minds were fully occupied with fighting the war was also mentioned as a factor in keeping health levels high.

England's experience shows what a brave and determined people can do to keep themselves comparatively well in the face of conditions which would appear to make high death rates and extensive illness almost inevitable. The American people learned long ago to honor them for the way in which they stood up against a powerful and brutal enemy. We should also honor them for the manner in which they conquered another foe, as dangerous and deadly as the German and Japanese war machines.

DEPARTMENT OF MEDICINE AND SURGERY IN THE VETERANS ADMINISTRATION

With the signing of H. R. 4717 by the President, now Public Law 293, there was created in the Veterans Administration a Department of Medicine and Surgery under a Chief Medical Director. General Bradley announces that he has designated General Paul R. Hawley to serve as Acting Chief Medical Director. This act will bring professional personnel into an organization comparable with the Army and Navy Medical Corps and the U. S. Public Health Service.

General Bradley immediately authorized the employment of physicians, nurses and dentists to fill existing vacancies. There is

an immediate need for 1,125 doctors, 1,200 nurses and 100 dentists.

Among the major provisions are:

1. Specialists certified by VA will be paid 25 per cent more salary up to a ceiling limit of \$11,000 a year.

2. Residencies will be set up in VA hospitals where younger doctors may study to qualify as specialists. This will mean that veterans will be able to obtain the most up-to-date medical treatment—the same kind as if they were admitted to hospitals connected with the nation's leading medical schools and centers.

3. Promotions will be made on recommendations of special VA boards which, in general, compare with the "selection boards" operating in the Army and Navy for higher ranking officers.

4. Office of Chief Medical Director. The director will be paid a salary of \$12,000 a year. A Deputy Medical Director will receive \$11,500 and Assistant Medical Directors—not to exceed eight in number—will be paid \$11,000 each.

5. Medical Service. Chief grade, \$8,750 minimum to \$9,800 maximum; Senior grade, \$7,175 minimum to \$8,225 maximum; Intermediate grade, \$6,230 minimum to \$7,070 maximum; Full grade, \$5,180 minimum to \$6,020 maximum; Associate grade, \$4,300 minimum to \$5,180 maximum; Junior grade, \$3,640 minimum to \$4,300 maximum.

6. Appointment of key executives will be for a four-year term, subject to removal by

the Administrator for cause. Reappointment will be for the same term.

7. Doctors, dentists, nurses and technicians now employed by the VA will be continued on their present jobs pending determination of their qualifications for appointment in the new medical department.

8. Another provision of the act which will permit professional improvement of VA medical personnel will allow up to five per cent of such employees to study or do research work for periods of time up to 90 days. This will enable doctors, dentists, nurses and technicians to attend recognized schools or work with the U. S. Public Health Service or other research groups. Officials pointed out that this would enable workers to keep abreast with the very latest developments in their respective fields.

9. Although they are not subject to selection or promotion by Civil Service, the members of the new VA Department of Medicine and Surgery will be under the Civil Service Retirement Act of 1920 and will receive its benefits.

General Hawley commenting on the President's action said:

"With the signature of the medical department act, our objective is clear—a medical service for the veteran that is second to none in the world. Around the splendid nucleus of excellent men and women in the VA medical service, we shall build such an outstanding service."

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

B. F. Austin, M. D.
State Health Officer

THE IMPACT OF THE WAR ON THE HEALTH DEPARTMENT

Early in May 1940, Alabama's late State Health Officer, Dr. J. N. Baker, went to Washington to confer with Surgeon General Thomas Parran of the U. S. Public Health Service and attend a meeting of the State and Provincial Health Authorities of North America. A few days later, while he was still away, there occurred the great German offensive against Holland, Luxemburg and

Belgium which, within a few weeks, made Hitler the unchallenged master of all western Europe and brought the Allied cause to the thin edge of complete disaster. Dr. Baker heard President Roosevelt address the Pan-American Scientific Congress and outline this country's foreign policy as it had been affected by the disastrous turn of events across the Atlantic. After his return Dr. Baker told his friends and fellow-health workers about the terrible solemnity of that occasion and the gravity of the President's words and manner as he discussed the latest news and what it meant to the American people.

From then on, the series of disasters in Europe shaped almost every aspect of American life, including public health in Alabama. During the weeks that followed the flanking of the Maginot Line and the invasion of France it was extremely difficult for the men and women of the staffs of the State and county health departments as well as others to keep their minds on their routine tasks, so imperiously did the world-shaking events of the great conflict intrude themselves upon everyone's consciousness. As soon as they could get away from their desks and work tables, they would hurry home to their radios and listen to the latest news broadcasts, one of the most memorable bits of news being the announcement by the French authorities, in early June 1940, that Paris would not be defended.

The State's public health agencies and its physicians were among the first to feel the impact of the change-over from peace and unpreparedness to grim preparation for war. As early as mid-July 1940, 2,075 Alabama physicians, in common with their professional confreres in other parts of the country, began receiving from the American Medical Association's Committee on Medical Preparedness questionnaires in which they were asked to inform the committee as to the extent to which they would be able to aid in the program of national preparedness for war "or for any other form of national emergency." The information requested included every physician's full name and address, his race, marital status, the names of any foreign languages spoken, his citizenship status, the name and location of the college or university where he received his medical training, years of licensure, membership or non-membership in a county medical society, hospital affiliations, physical condition, and availability for service with the nation's armed forces in the event of war. As in other aspects of the nation's effort to prepare itself for war, the State Department of Health cooperated in the distribution of those questionnaires, checked up on those which were not promptly returned, and assisted in other ways in the mobilization of Alabama's physicians for the uncertain tasks ahead. Those questionnaires, containing virtually offers to go into uniform upon request of the proper authorities, brought the seriousness of the international crisis home to the State's men and

women of medicine more forcibly than anything else up to that time. And it need hardly be added that promises made in filling out and returning those printed forms were translated into valiant performance on and near the battlefield a few months and a few years later by the 268 Alabama physicians who served in the armed forces in every part of the world. Of this number five gave their lives.

As time went on public sentiment favoring compulsory military training for the nation's youth became much stronger, and it was soon evident that, for the first time in the nation's long history, a peacetime draft of American manhood was about to become a fact. And even before that sentiment became crystallized into law the Army and Navy began intensive recruiting campaigns, the National Guard began to prepare for stern tasks, and reserve officers began preparing for official notices to report for active duty. It was only natural that parents, accustomed to the ways of peace, were fearful lest the health conditions in camp and on shipboard prove harmful. To relieve the fears of Alabama parents, the State Health Officer issued a public statement emphasizing that such fears were groundless and that their sons' and husbands' health would probably be taken better care of in the Army and Navy than at home.

It soon became evident that, even if this country should be fortunate enough to avoid participation in the war, the preparedness program itself would lay a heavy hand upon the State's public health agencies. It was revealed as early as mid-August 1940 that 11 members of the staff of the State Department of Health—two physicians, one dentist, three laboratory workers, four engineers and one senior sanitarian—were members of the Officers' Reserve Corps and subject to call to active service. In the public health field on the county level it was found that 14 county health officers, 13 sanitation officers, one nurse and one meat inspector also held reserve commissions, while three public health nurses were identified with the American Red Cross Reserves and one staff member was a member of the National Guard. In that short time—just a matter of weeks—two sanitation officers had already resigned to join the armed services. These two con-

stituted the vanguard of a veritable army of public health workers of almost every classification who withdrew temporarily from their normal peacetime tasks to assume grimer tasks in the grim business of war.

Plans to draft and train a huge army were formulated and put into execution simultaneously with plans to gear the nation's productive genius to the needs of a state of national preparedness. As early as the summer of 1940 the government began placing huge orders for the instruments of war-making, and a great industrial army came into being even before the army of fighters. That brought many problems of industrial health for the State's public health agencies to solve, problems growing out of the revolutionary shifting of population from rural areas and small towns to great industrial centers. Proper supervision of food manufacturing and food handling establishments, curbing of those illnesses due to overcrowding, protection of swollen populations against the hazards of impure milk, and checkmating the traditional tendency of the venereal diseases to become more prevalent in wartime—these were only a few of the many difficulties which the preparedness program left at the doorstep of the State Department of Health and the county health departments. As serious as these problems were in that twilight zone between war and peace, they were to become much more serious after this country became an active participant in the struggle.

One of the first of the State Health Department's activities to feel the full impact of the industrial change-over from peace to preparedness was that having to do with the issuing of certified copies of birth and death certificates. There had long been a considerable demand for them by persons about to enter school, planning trips abroad, wishing to settle estates and needing them for other purposes, but that demand had been stabilized, and there had been little or no trouble in keeping up with it. But as the preparedness production program got under way and government officials realized the dangerous potentialities of having persons of unknown loyalty employed in key positions, an order was issued that those applying for positions in important manufacturing plants could not be employed unless they could produce proof of American citizenship. The best proof of American

citizenship, as well as of many other important things, is a certified copy of one's birth certificate, and in a matter of just a few weeks there was a veritable flood-tide of requests (along with the proper fee) of these all-important documents. By mid-August 1940, these requests had increased at least 500 per cent over those of a few months earlier. At that time, it was revealed, between 4,000 and 5,000 unfilled requests were on file and there was a delay of about a month in filling them. Additional employees were assigned to this work, and in time it became possible to fill requests almost as soon as they were received.

The impact of the war was also felt about that time in another important public health activity. For some time the State and county health departments had been using red squill, a form of poison, in their joint rat-killing campaigns aimed at curbing endemic typhus fever (Brill's disease). This is an imported product produced in Sicily, and the British blockade and other war conditions soon made it so scarce and expensive that the lack of an adequate supply threatened to prove a serious handicap to the protection of Alabamians against that disease. As in the case of other shortages, however, various expedients were resorted to in order to carry on the work. The use of cyanide gas to kill rats was found to be effective, although it involved some problems not present when red squill is available in plentiful supply.

The plight of London's bombed-out population aroused the sympathy of public health workers in disturbed but war-free Alabama, and they gladly contributed to the Allied Relief Fund. The fund received a public indorsement from the State Health Officer, who called upon Alabamians of all levels of society to help those across the Atlantic in order to "make it easier for them to keep up their determination to see the war through to a successful end, regardless of the frightfulness and terror." The substantial sum contributed to the fund from Alabama brought a warm note of thanks and appreciation from an official in charge of the campaign nationally.

The State Health Officer made an appeal a short time later to Alabama physicians to help relieve the dangerous shortage of medical supplies and instruments in En-

gland by donating any they might not need to the Medical and Surgical Supply Committee, with headquarters in New York. The appeal pointed out that, while medical supplies having a value estimated at \$25,000 had recently been shipped to that beleaguered country, "there is a crying need for more."

Alabama public health agencies' greatest single contribution to the nation's preparedness campaign in 1940, however, was made on October 16, when men between the ages of 21 and 36 registered for the first peacetime draft in the nation's history. On that day registrants of 11 counties—Colbert, Jackson, Walker, Talladega, Greene, Chambers, Geneva, Monroe, Autauga, Cullman and Washington—were offered free blood tests to determine whether they had syphilis. Registrants of the other 56 counties received free tests, if desired, shortly afterward. Approximately 60 per cent of all Alabama registrants availed themselves of this opportunity, and thus, for the first time, the State Department of Health had a large-scale "syphilis inventory" of this important segment of the State's population.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

NOVEMBER 1945

Examination for diphtheria bacilli and Vincent's	956
Agglutination tests (typhoid, Brill's, undulant fever)	683
Typhoid cultures (blood, feces and urine)	629
Examinations for malaria	516
Examinations for intestinal parasites	1,371
Serologic tests for syphilis (blood and spinal fluid)	24,613
Darkfield examinations	46
Examinations for gonococci	3,246
Examinations for tubercle bacilli	1,321
Examinations for Negri bodies (microscopic)	127
Water examinations	1,029
Miscellaneous	437
Total	34,974

**ANNUAL MEETING
OF THE
ASSOCIATION
BIRMINGHAM
APRIL 16-18, 1946**

BUREAU OF SANITATION

T. H. Milford, M. S., in S. E., Director

TOURIST CAMPS

Contributed by

L. W. Grogan, Senior Sanitarian

Tourist camp regulations were adopted by the State Board of Health in 1937. However, interdepartmental differences held up application or enforcement of them for several years. The personnel shortage during the war caused further postponement of their application. Emergency tourist and trailer camp regulations were prepared for application by county health departments in defense areas, and 17 county boards of health adopted these. In the remaining counties no supervision of these camps has been given either by the state or county health departments.

Many tourist camps ceased operation during the war. Most of these were of the poorer type structurally and from an operation standpoint. The hotels of the state have been crowded throughout the war. Present indications are that the number of transients seeking sleeping accommodations will increase materially. Very few reports concerning construction of new hotels have reached this department, so that hotel facilities probably will not be materially increased in the near future. A number of new tourist camps are under construction and reports have been received of plans for construction of several additional, as well as for additions at a number of existing ones and plans for reopening some that have not operated for several years.

Late in 1945 the state inspectors checked 159 tourist camps to determine their present condition, using the hotel inspection report. It is not known what percentage of the total camps this represents. The 159 camps inspected had 1701 rooms. A total of 452 mandatory items were found violated. The most frequent violations were poor conditions of floors, walls and ceilings; unprotected water supplies; improper disposal of sewage and liquid wastes; inadequate number of toilets and bath facilities; and absence of screens or screens in bad repair. All of these violations are important from a public health standpoint. Only a part of the camps were scored to determine methods of opera-

tion. However, those not scored were marked as to general suitability for occupancy by transients. Forty-one per cent were indicated as being operated well or reasonably well.

The findings on the survey of tourist camps clearly indicate need for placing them under regular supervision. However, since the present tourist camp regulations have never been enforced, and are more than eight years old and therefore need revision, it appears wise to adopt new regulations that will not need early revision before regular supervision of these camps is inaugurated. Preparation and adoption of such regulations may take several months. In the meantime, a number of camps may be reopened, remodelled, or enlarged, and even new camps constructed. Since a definite decision to start supervision of tourist camps as soon as possible has been made, county sanitation officers are urged to get in touch with any person constructing a new camp, as well as those reopening, remodelling or enlarging an existing camp. He can render valuable assistance in the following, even without mandatory regulations:

1. Camps should be on a well drained site which will permit installation of a septic tank and disposal field if no public sewers are available, and should not be located in a known malaria mosquito breeding area.

2. All human wastes should be conducted to a sewer or septic tank. Other liquid wastes such as bath and wash water should be disposed of in the same way or at least be conducted to an underground disposal system. Public toilets for each sex should be provided if every cabin is not provided with a private toilet, as well as toilets for colored employees if any.

3. Cabins or bedrooms should have at least 10 square feet of window area per room and be provided with artificial lights; at least 60 square feet of floor area and preferably more; sound, smooth floors, walls and ceilings; properly installed plumbing; all exterior openings effectively screened; door locks; and heating appliances which are properly constructed and vented if needed for safety.

4. The water supply should be adequate, protected and of a safe quality.

All of the above are basic and will certainly be included in any new regulations drawn.

BUREAU OF VITAL STATISTICS

Miss Ethel R. Hawley, Acting Director

PROVISIONAL MORTALITY STATISTICS

REPORTED BIRTHS, STILLBIRTHS, DEATHS FROM
CERTAIN IMPORTANT CAUSES AND RATES*—

OCTOBER 1945, 1944, 1943

Births, Stillbirths, and Causes of Death	Number of Deaths Registered— October 1945			Rate (Annual Basis)		
	Total	White	Colored	1945	1944	1943
Births, exclusive of stillbirths	5804	**	**	23.6	24.6	26.2
Stillbirths	158	**	**	26.5	31.6	32.0
Deaths, exclusive of stillbirths	2057	1243	814	8.4	8.4	8.7
Infants deaths:						
Under one year	271	155	116	46.7	42.9	38.9
Under one month	167	103	64	28.8	25.5	23.2
Typhoid and paratyphoid 1, 2	1	1		0.4	0.8	0.4
Epidemic cerebrospinal meningitis 6	1	1		0.4	1.6	0.4
Scarlet fever 8	1		1	0.4	0.4	0.0
Whooping cough 9	6	3	3	2.4	1.6	3.2
Diphtheria 10	17	14	3	6.9	5.3	4.1
Tuberculosis, all forms 13-22	90	41	49	36.6	44.0	40.3
Malaria 28	2		2	0.8	2.8	3.7
Syphilis 30	30	5	25	12.2	12.2	10.6
Influenza 33	14	7	7	5.7	3.7	11.0
Measles 35				0.0	0.0	0.4
Poliomyelitis 36	2	2		0.8	0.4	0.0
Encephalitis 37	1		1	0.4	0.4	0.0
Typhus fever 39	4	3	1	1.6	1.6	1.2
Cancer, all forms 45-55	182	121	61	74.0	72.6	65.9
Diabetes mellitus 61	32	26	6	13.0	11.0	11.8
Pellagra 69	8	2	6	3.3	4.1	5.7
Alcoholism 77	2	1	1	0.8	1.2	1.2
Intracranial lesions 83	172	102	70	70.0	79.1	87.9
Diseases of the heart 90-95	461	295	166	187.6	159.9	178.2
Diseases of the arteries 96-99	33	25	8	13.4	11.4	10.2
Bronchitis 106	3	2	1	1.2	1.2	0.8
Pneumonia, all forms 107-109	83	41	42	33.8	39.2	45.6
Diarrhea and enteritis (under two) 119	29	17	12	11.8	8.6	4.9
Diarrhea and enteritis (2 and over) 120	6	3	3	2.4	1.6	2.0
Appendicitis 121	10	7	3	4.1	6.9	5.7
Hernia, intestinal obstruction 122	18	14	4	7.3	5.7	8.1
Cirrhosis of the liver 124	9	4	5	3.7	4.1	6.5
Nephritis, all forms 130-132	149	84	65	60.6	60.0	57.0
Diseases of the puerperal state 140-150	20	10	10	33.5	35.2	37.5
Puerperal septicemia 140, 142a, 147	5	2	3	8.4	11.2	7.5
Suicide 163-164	17	16	1	6.9	4.1	3.7
Homicide 165-168	33	10	23	13.4	10.2	10.2
Accidental deaths (exclusive of motor vehicle) 169, 171-195, 201-205, 212-227	108	75	33	43.9	44.0	41.1
Motor vehicle 170, 206-211	60	49	11	24.4	20.0	16.3
All other known causes	337	225	112	137.1	147.7	152.2
Ill-defined and unknown causes 199-200	116	37	79	47.2	61.2	70.0

**Not available.

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific cause per 100,000 population; from puerperal causes per 10,000 total births.

Medical News

(Secretaries of county medical societies and other physicians will confer a favor by sending for this section of the Journal items of news relating to society activities.)

The American College of Surgeons announces the resumption in 1946 of its sectional meetings, which, during the war, were replaced by one-day war sessions. Ten two-day meetings are planned. The first was in Minneapolis, with headquarters at the Radisson Hotel, on January 28 and 29. The second meeting was held in Hotel Jefferson, St. Louis, January 31 and February 1; and the third in the Tutwiler Hotel, Birmingham, February 8 and 9. The fourth is scheduled for the William Penn Hotel, Pittsburgh, March 11 and 12; the fifth in the Statler Hotel, Boston, March 18 and 19; the sixth in Mt. Royal Hotel, Montreal, March 22 and 23; the seventh in the Statler Hotel, Detroit, March 26 and 27; the eighth in the Utah Hotel, Salt Lake City, April 8 and 9; the ninth in the Multnomah Hotel, Portland, Oregon, April 12 and 13, and the last in the Biltmore Hotel, Los Angeles, April 17 and 18.

The medical profession at large, medical students, and hospital executives are invited to join with the Fellows of the College in these meetings. The invitation has been extended to the entire medical and hospital profession because only local meetings of medical groups have been held during the past three or four years and the College recognizes the need for disseminating information about new methods and therapies through larger meetings addressed by nationally prominent speakers.

Separate meetings are planned each morning and afternoon for hospital personnel, with joint luncheon sessions on both days and a dinner meeting on the first evening. The programs for the medical profession begin at 8:30 each morning with the showing of medical motion pictures, followed by scientific sessions. Scientific sessions will also be held each afternoon. The dinner on the first evening will be followed by a forum on graduate training in surgery.

Among the subjects scheduled for discussion at the meetings for the medical profession are the following: Treatment of Infection by Chemotherapy and the Antibiotics; Injuries to the Bile Ducts; Pre- and

Postoperative Supportive Treatment; Treatment of Open Wounds; Treatment of Osteomyelitis; Management of Advanced Cancer; The Care of the Veteran; and The Reconversion Period in the Practice of Medicine. The hospital conferences will be devoted to discussion of high standards for postwar hospitals, approached from the standpoints of administration, professional services, and care of different types of patients.

Headquarters of the American College of Surgeons are in Chicago. Dr. Irvin Abell of Louisville is Chairman of the Board of Regents; Dr. W. Edward Gallie of Toronto is President; and Dr. Malcolm T. MacEachern and Dr. Bowman C. Crowell are Associate Directors. The fellowship totals about 14,000 surgeons in the United States, Canada, and a few other countries.

* * *

Approximately three hundred were in attendance at the first health conference sponsored by the Allied Health Council of Alabama which was held at the Thomas Jefferson Hotel, Birmingham, November 27-28, with C. B. Bray, D. D. S., president, presiding. B. F. Austin, M. D., was general chairman. Included in this attendance were representatives of the basic health groups composing the Council; namely, dentistry, hospitals, medicine, nursing and pharmacy, and also representatives of scores of other organizations and groups as well as individuals interested in public health.

Officers of the Council presented by Dr. Bray, president, during the Conference were: Thelma Morris Coburn, Executive Secretary of the Alabama Pharmaceutical Association, secretary-treasurer; and Executive Board Members: Dr. B. F. Austin, representing the State Medical Association; Dr. B. F. Sapienza, representing the Alabama Dental Association; C. L. Sibley, representing the Alabama Hospital Association; Mrs. Walter Bragg Smith, representing the Alabama State Nurses Association; and E. W. Gibbs, representing the Alabama Pharmaceutical Association.

* * *

The National Gastroenterological Association announces the establishment of an annual cash prize award of \$100 and a certificate of merit for the best unpublished contribution on gastroenterology or allied sub-

jects. Certificates will also be awarded those physicians whose contributions are deemed worthy.

Contestants residing in the United States must be members of the American Medical Association. Those residing in foreign countries must be members of a similar organization in their own country. The winning contribution will be selected by a board of impartial judges and the award is to be made at the annual convention banquet of the National Gastroenterological Association to be held at the Hotel Pennsylvania in New York City on Thursday evening, June 20, 1946.

Certificates awarded to other physicians will be mailed to them. The decision of the judges will be final. The Association reserves the exclusive right of first publishing the winning contribution, and those receiving certificates of merit, in its official publication, *The Review of Gastroenterology*. All entries for the 1946 prize should be limited to 5,000 words, be typewritten in English, prepared in manuscript form, submitted in five copies, accompanied by an entry letter, and must be received not later than May 1, 1946. Entries should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

* * *

The Southeastern Surgical Congress will hold its next Assembly at Memphis, March 11, 12, 13, 1946 at the Peabody Hotel.

The following is a partial list of those who will take part on the program:

Dr. Conrad G. Collins, New Orleans
Dr. Merrill N. Foote, Brooklyn
Dr. Clarence E. Gardner, Durham
Dr. James E. Hemphill, Charlotte
Dr. Robert Hingson, Jr., Staten Island
Dr. Arnold Jackson, Madison, Wis.
Dr. Roy R. Kracke, Birmingham
Dr. Karl A. Meyer, Chicago
Dr. J. O. Morgan, Gadsden, Ala.
Dr. Curtice Rosser, Dallas
Dr. Harold E. Simon, Birmingham
Dr. G. L. Simpson, Greenville, Ky.
Dr. Horace G. Smithy, Charleston, S. C.

* * *

The American College of Physicians will resume its annual meetings in 1946 and has now definitely chosen Philadelphia, May

13-17, inclusive. Headquarters will be at the Philadelphia Municipal Auditorium, 34th Street below Spruce.

The meeting will be conducted under the Presidency of Dr. Ernest E. Irons, Chicago, Illinois, and the General Chairmanship of Dr. George Morris Piersol, Philadelphia, Pennsylvania.

* * *

The Chicago Medical Society will hold its Annual Clinical Conference at the Palmer House, Chicago, Illinois, March 5, 6, 7, 8, 1946. All physicians are invited to attend this conference and hear the outstanding specialists from all sections of the country discuss subjects of major interest.

The American Urological Association offers an annual award not to exceed \$500 for an essay (or essays) on the result of some specific clinical or laboratory research in urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. All interested should write the Secretary for full particulars.

The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Netherland Plaza, Cincinnati, Ohio, July 22-25, 1946.

Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before July 1, 1946.

* * *

The Montgomery County Medical Society entertained with a testimonial dinner for Dr. Charles A. Thigpen on January 15, complimenting him on more than a half century of practice that has brought him an international reputation in his specialty.

"You are honoring one of the greatest men it has ever been my privilege to know," wrote Dr. Andrew B. Rivers of the Mayo Clinic, expressing regret at his inability to attend the testimonial dinner. "He has been my ideal for many years. He is not only a splendid doctor; he is a great man, and his

influence has reached far beyond his home state."

Many others paid tribute in person and by telegram.

Dr. Forney C. Stevenson of Montgomery served as toastmaster and voiced national appreciation of the man his home town was honoring through the Montgomery County

Medical Society.

* * *

Scientific exhibits will be a feature of the 1946 meeting of the Association in Birmingham. Dr. Stewart H. Welch is the Chairman in charge, and anyone who has an exhibit to present should communicate with him.

AMERICAN MEDICAL ASSOCIATION NEWS

116 PHYSICIANS DIE IN ACTION DURING 1945. JOURNAL REPORTS

Death claimed approximately 4,015 physicians during 1945 as compared with 3,415 the previous year, according to the January 19 issue of The Journal of the American Medical Association.

On the basis of an analysis of 2,962 obituaries published in The Journal during the year, it was found that the average age at death was 65.3, the same as in 1944. The majority of the physicians—494—died between the ages 70 and 74.

Heart disease continued to lead the causes of death among physicians. Coronary thrombosis and occlusion accounted for 655 deaths, 246 occurring between the ages 60 and 69. Cancer and tumors accounted for 296, and pneumonia claimed 145 doctors.

Of the 25 suicides recorded, 11 were the result of bullet wounds, three of a cut artery and three of drugs. There were 87 accidental deaths and 33 of them involved automobiles.

Among the decedents were 256 who had been teachers in medical schools, of whom 97 had reached professorial status. There were eight deans, one of whom had also been president of a medical college, two principals of a high school, two teachers in public schools, one of whom had been head of the business and practice department of the city's high schools, and 78 members of education boards. One hundred and forty-four had been health officers.

The 2,962 Journal obituaries included 116 physicians who were killed in action during World War II and 118 who died while in military service. Nineteen physicians lost their lives in the Pacific area 13 in Germany, 12 each in the European Theatre of

Operations and in France, and 11 in Okinawa, including six who were lost in the attack on the Comfort.

Of the 118 physicians who died while in military service, aircraft accidents caused the deaths of 22 and vehicle accidents of 10. Heart disease accounted for 25 deaths, 12 of which were attributed to coronary thrombosis. Cancer caused 13 deaths.

The 116 deaths classified killed in action give an average age of 33.0, while the 118 who died while in military service average 40.1. By combining the two, an average age of 36.6 is noted.

Of the seven U. S. Public Health Officers whose deaths were recorded, one died when he slipped on the Jacob's ladder while assisting wounded aboard ship and one when his ship was destroyed in enemy action.

NEW ASSOCIATE GENERAL MANAGER

Dr. George F. Lull, formerly deputy Surgeon General, United States Army Medical Corps, has been appointed Associate General Manager of the American Medical Association. He took up his new duties this month.

DOCTOR SAYS DELAY, FEAR, IGNORANCE STILL CAUSE MANY CANCER DEATHS

John J. Creedon, M. D., chief resident surgeon of Doctors Hospital, New York, says that delay, fear, superstition, ignorance and quackery still cause thousands of cancer deaths each year among those who could unquestionably have been saved.

Dr. Creedon, writing in the current issue of Hygeia, the health magazine of the American Medical Association, states that "cancer

is being cured completely every day in the year."

Terming the cancer problem as old as time itself, the New York surgeon says that cure rests largely on early recognition of symptoms. "It is far better to suspect that you have cancer," he says, "and be told that you have not, than it is to be told that you are beyond help because you delayed too long." Continuing, he writes:

"The most common and most deadly cancer is that of the stomach. About one-half of all cases of cancer in men and one-third of all cases of cancer in women involve cancer of the stomach. One-fourth of all the cancer deaths reported results from growths in this organ.

"Unfortunately, because of the relatively few symptoms in the early stage, diagnosis is often a difficult one. If the cancer is at the end of the stomach, signs of obstruction may arise early and detection is easier. However, if the malignant tumor is high, the symptoms may be minor for many months.

"Persistent digestive symptoms without apparent cause in anyone beyond the age of 40 should be investigated. However, the disease can and does occur at any age. Loss of appetite, gas, belching, and perhaps very mild abdominal pain may be the only signs present. Unexplained weight loss may be the chief complaint. Later, nausea becomes a common complaint, and as the tumor grows it begins to bleed inwardly and often a profound anemia results. This very often may be the only clue to a malignancy of the stomach, and must always be considered during the examination of a patient with an anemia and unexplainable weight loss. Later, vomiting may occur because of the obstruction caused by the tumor mass. Severe pain, unfortunately, is usually a late symptom.

"Cancer of the stomach, like all cancers, can be cured, but it must be diagnosed early. Any vague digestive complaint should be quickly reported to a competent physician, and a thorough investigation conducted.

"The large bowel, which consists of the colon and rectum, is also a frequent site of cancer. Approximately 10 per cent of all deaths from cancer result from this lesion. The presence of cancer in the colon gives rise to signs and symptoms comparatively

early, but, unfortunately, these are also of a minor nature and may not lead the patient to a physician immediately. These tumors tend to spread rather late in their course, and about one third of them may cause death by their local effects before they have spread beyond the point of surgical removal. The results of surgical treatment in cancer of the large bowel are better than those for any other type of cancer of the digestive tract. Although the lesion may occur anywhere in the large bowel, the left colon is the most common site.

"Our hopes of increasing the percentage of cures in cancer rest with the patient. Many people would be alive today had they heeded the early signs of their disease. Surgical technic has been greatly improved. However, a physician can do nothing with a patient who presents himself too late."

MEAT IS VITAL PROTEIN SOURCE IN DIET OF EXPECTANT MOTHERS

Meat is necessary in the diet of expectant mothers because of its high protein content, according to Ruth M. Leverton and Thelma J. McMillan of the Nebraska Agricultural Experiment Station at Lincoln.

The purpose of this study, reported in the January 19 issue of *The Journal of the American Medical Association*, was to "test the effectiveness of a simple dietary recommendation that could be made to the patient by the physician, whether family doctor or specialist, and which if followed would insure an increased protein intake for the pregnant woman, especially the one with anemia."

The experimenters said they tested the effectiveness of the recommendation "Eat plenty of meat—a generous serving at least twice a day."

Protein supplies the material to replace tissue waste and, to some extent, contributes to the development of energy.

Results were reported for 33 women, or 11 sets of three matched partners. All were the private patients of Lincoln obstetricians and were under 33 years of age.

To insure that the women were receiving "plenty of meat," they were supplied with a five-ounce serving of lean meat daily. They ate this supplementary meat in addition to their self-chosen diets. For each woman

who was supplied meat, there were two experimental partners, women of approximately the same age, who had had the same number of children, were at the same stage of pregnancy and whose blood had the same hemoglobin value. One partner received a vitamin B complex supplement daily while the other partner received no supplement.

The supplements of meat and vitamin B complex were begun early in the fifth month of pregnancy and continued for three months after delivery. The control member of each trio was studied for the same length of time. Each woman kept a record of her food intake for one week during the eighth month of pregnancy, and from this was calculated her protein intake.

Results showed that the women who received the additional meat had consistently better hemoglobin and red cell values at all times than did their experimental partners who received either B complex or no supplement at all. There was no edema, and better success was attained in the secretion of milk among the meat eating group.

One month after delivery the meat eating group had an average hemoglobin value 20 per cent higher than when the meat supplementation was begun, as compared with 7 per cent and 4 per cent for the B complex and control groups respectively. The red cell values were 20 per cent higher for the meat supplement group and 10 per cent and 12 per cent higher for the B complex and control groups.

All of the pregnancies and deliveries were without complications. None of the subjects receiving extra meat experienced edema, whereas three of the B complex group and three of the controls had slight edema.

The authors stated that "the subjects receiving extra meat who had had previous pregnancies almost invariably volunteered the comment that they 'did not feel so tired all the time' as they had during other pregnancies."

SAFE DISINFECTANT FOUND TO COMBAT PENICILLIN DESTROYING BACTERIA

Medical science has known for some time that a bacterial agent which destroys the effectiveness of penicillin exists in certain types of infections and contaminated accidental wounds such as compound fractures

and burns. Numerous attempts have been made to isolate this destructive agent and to find an antiseptic which would destroy it.

Four investigators report in the January 19 issue of *The Journal of the American Medical Association* that parachlorophenol, a crystalline substance, has been found to be a safe and strong disinfectant which combines effectively with penicillin in such cases.

The authors were: Frank L. Meleney, M. D., Balbina A. Johnson, B. A., and Frances Colonna, M. S., of New York, and Capt. Edwin J. Pulaski, Medical Corps, Army of the United States. The work was done under a contract, recommended by the Committee on Medical Research, between the Office of Scientific Research and Development and the Columbia University College of Physicians and Surgeons.

"In the course of our study of established infections during the past year and a half," the authors reported, "it has been demonstrated frequently that penicillin is of questionable benefit or no benefit at all in the treatment of many infections in which there is a mixture of organisms."

Penicillinase is a destructive agent produced by some germs which may interfere with the action of penicillin. When penicillinase acts slowly its effect may be offset by increasing the number of units of penicillin given. However, the danger always exists that the amount of penicillin is insufficient to destroy susceptible bacteria. Thus susceptible germs may become resistant to penicillin. The 'miracle drug' then has no effect on the treatment of the disease.

The authors tested 134 strains of gram-negative bacteria isolated from wound infections for their destructive action on penicillin. They found that "of the antiseptics so far tested and which are available at present, parachlorophenol is the most effective antibacterial agent against gram-negative organisms."

Gram-negative bacteria are determined by means of a stained slide. This is washed with alcohol. The bacteria which do not retain the dye are gram-negative and after they have been dipped in a contrasting dye they are observable. Such bacteria as the gonococcus, specific organism causing gonorrhea, are gram-negative.

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Miscellany

INFANTILE PARALYSIS VIRUS IS ACTIVE LONG BEFORE DETECTION

Buffalo, N. Y., and Chicago investigators find that there is a definite pattern to infantile paralysis and that actually an epidemic may start months before any paralytic cases are recognized, according to articles in the December 22 issue of The Journal of the American Medical Association.

The Buffalo authors, Martha L. Smith, M. D., Edward M. Bridge, M. D., Helen E. Underwood and Grace E. Dale, from the Department of Pediatrics of the University of Buffalo School of Medicine and the Statler Research Laboratories of the Children's Hospital of Buffalo, based their study on the origin of an epidemic which occurred in the Buffalo area in 1944.

They reported that "evidence has been accumulated which points to the conclusion that the disease was prevalent in the initial community long before the first case of paralysis was recognized. This evidence is based on studies of the illnesses among contacts, both direct and indirect, of the first three cases of paralysis and on a knowl-

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edge of the minor illnesses, many of which were undoubtedly caused by the virus of poliomyelitis, which occurred in the school population during the months preceding the outbreak."

In Chicago, two physicians, Albert E. Casey, Birmingham, Ala., and William I. Fishbein, Chicago, working under Herman N. Bundesen, M. D., President of the Chicago Board of Health and Chairman of the Epidemic Committee of the National Foundation for Infantile Paralysis, Inc., concluded after their study that:

1. Multiple cases of poliomyelitis in the family were the rule rather than the exception when there were other children from 1½ to 8½ years of age in the home.

2. Poliomyelitis was found to be contagious perhaps to the degree of 90 per cent in the 1½ to 3½ age group but less infectious in the older groups.

3. There was no evidence that flies and other insects played a major role in the spread of the disease in the neighborhoods studied, once the disease had been introduced.

4. Only about 1½ out of 6 instances of poliomyelitis would have been diagnosed as such, even under an alert public health reporting system, without an intensive neighborhood study. Illness in the other cases of poliomyelitis was so mild in most instances that a physician was not consulted.

5. Paralysis developed in about 1 case in 6, and about 2 in 6 could be confirmed only by animal inoculations or by spinal fluid protein examination done two to seven weeks after onset.



Let your HEAD take you

(The average American today has a choice of just going where "his feet take him", or choosing wisely the course to follow. Let's skip ahead 10 years, and take a look at John Jones—and listen to him . . .)

"SOMETIMES I feel so good it almost scares me. "This house—I wouldn't swap a shingle off its roof for any other house on earth. This little valley, with the pond down in the hollow at the back, is the spot I like best in all the world.

"And they're mine. I own 'em. Nobody can take 'em away from me.

"I've got a little money coming in, regularly. Not much—but enough. And I tell you, when you can go to bed every night with nothing on your mind except the fun you're going to have tomorrow—that's as near Heaven as man gets on this earth!

"It wasn't always so.

"Back in '46—that was right after the war and sometimes the going wasn't too easy—I needed cash. Taxes were tough,

and then Ellen got sick. Like almost everybody else, I was buying Bonds through the Payroll Plan—and I figured on cashing some of them in. But sick as she was, it was Ellen who talked me out of it.

"Don't do it, John!" she said. "Please don't! For the first time in our lives, we're really saving money. It's wonderful to know that every single payday we have *more* money put aside! John, if we can only keep up this saving, think what it can mean! Maybe someday you won't have to work. Maybe we can own a home. And oh, how good it would feel to know that we need never worry about money when we're old!"

"Well, even after she got better, I stayed away from the weekly poker game—quit dropping a little cash at the hot spots now and then—gave up some of the things a man feels he has a right to. We didn't have as much fun for a while but we paid our taxes and the doctor and—we didn't touch the Bonds.

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BIRMINGHAM, ALABAMA
FEBRUARY 19-22, 1946

TUESDAY, FEBRUARY 19, 1946

- 10:00—Modern Concepts of Treatment of Diabetes Mellitus
Bert Wiesel.
11:00—Symptoms and Diagnosis of Peptic Ulcer
Ivan Berrey.
12:00—Lunch.
2:00—The Management of Edema in Nephritis.
E. D. Lineberry.
3:00—Clinical-Pathological Conference.
J. S. McLester.
4:00—Coronary Occlusion.
J. E. Hirsh.
8:00—The Drug Treatment of Tuberculosis.
Guest Speaker, Dr. Julius L. Wilson.
Ochsner Clinic, Tulane University.

WEDNESDAY, FEBRUARY 20, 1946

- 10:00—Management of Latent Syphilis.
R. O. Noojin.
11:00—Round Table, Pulmonary Diseases.
W. S. Armour, Kellie Joseph, J. G. Bohorfoush.
12:00—Lunch.
2:00—Medical Clinic.
Dr. Julius L. Wilson.
3:00—Somatic Complaints in Psychiatric Disorders.
F. A. Kay.

- 4:00—Hyperthyroidism.
G. S. Graham.
8:00—Emphysema and the Mechanics of Breathing.
Dr. Julius L. Wilson.

THURSDAY, FEBRUARY 21, 1946

- 10:00—Salient Features in the Diagnosis of Rheumatoid Arthritis, Fibrositis, and Gout.
J. O. Finney.
11:00—Neurology.
W. S. Littlejohn.
12:00—Lunch.
2:00—Hematology.
R. R. Kracke.
3:00—Ward Rounds—Nutrition.
J. S. McLester.

FRIDAY, FEBRUARY 22, 1946

- 10:00—Latest Advances in Prevention and Treatment of Communicable Diseases.
Hughes B. Kennedy, Jr.
11:00—Pediatric Clinic.
A. A. Walker.
12:00—Lunch.
2:00—Behavior Problems in Childhood.
John W. Simpson.
3:00—Dr. R. V. Platou, Associate Professor of Pediatrics, Tulane University.
4:00—Hemorrhagic Diseases in Infancy and Childhood.
R. R. Kracke.
8:00—Dr. R. V. Platou.

REGISTRATION FEE \$5.00

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BACKGROUND

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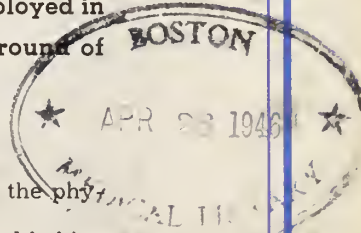
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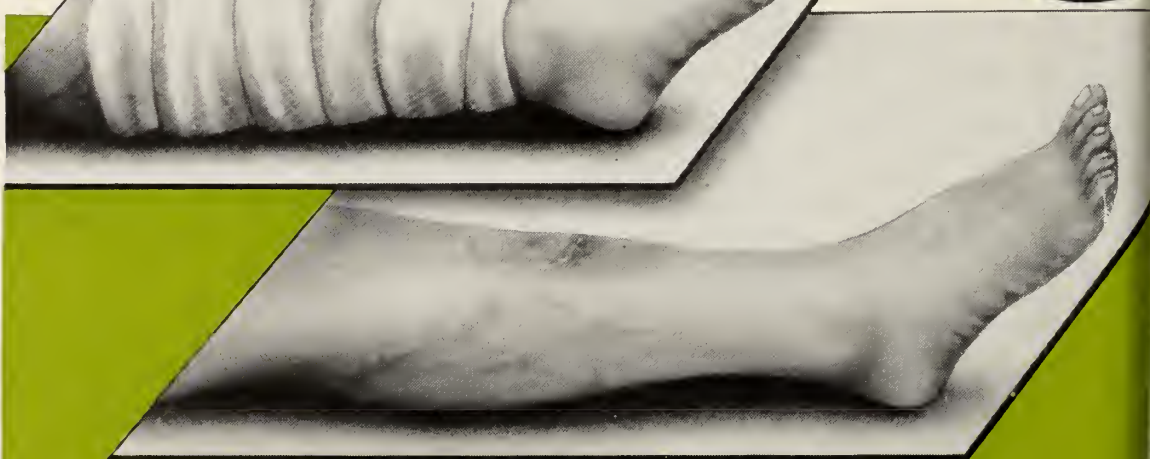
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BRONCHOSCOPY AND ESOPHAGOSCOPY IN GENERAL MEDICINE

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In a previous paper¹ the author called attention to the increasing importance of bronchoscopy and esophagoscopy as diagnostic and therapeutic adjuncts to the physician in the general practice of medicine. Many interesting cases have been seen since that time which further influence our concept of the importance of these procedures. The day has long since passed when bronchoscopy and esophagoscopy have been called into play merely for the removal of foreign bodies lodged in the air and food passages, although this phase of bronchoesophagology still plays a major role.

Many patients, who, in past years, have been classified diagnostically as having bronchial asthma, or as having pneumonia, are now being found to be suffering from neoplasms of the larynx, trachea and bronchi. Bronchoscopy reveals the obstructing new growths, and biopsy material studied microscopically makes certain the diagnosis. Lung abscess, bronchiectasis, and tracheo-bronchial tuberculous lesions now receive direct, concise treatment through these means.

Hoarseness, appearing insidiously and increasing in severity, is a symptom which should warrant our careful investigation. Many small benign tumors of the larynx, such as papillomata and fibromata, are easily dealt with by direct laryngoscopic ex-

amination and removal of the offending tissue. However, it is not until this tissue is removed and studied microscopically that a more serious growth such as carcinoma can be eliminated. In the past, juvenile papilloma of the larynx, appearing in children prior to puberty, has been extremely troublesome. This is now easily eliminated by spraying the larynx thoroughly and frequently with the estrogenic hormone found in amniotin². If the laryngeal growth proves to be a carcinoma, it can be easily and completely removed by a laryngofissure operation, if located in the middle or anterior one-third of the vocal cord. You need not expect a recurrence of the growth, following this operation, if the neoplasm has not metastasized to the lymph gland overlying the cricothyroid membrane.

Several interesting cases of neoplastic disease of the trachea have previously been reported by the writer³. One of the patients was first seen in October 1940, complaining of dyspnea and wheezing on inspiration and expiration. The usual treatment for bronchial asthma had been instituted several months prior to our consultation, which was initiated by the patient's expectoration of blood. Bronchoscopy revealed a large mulberry-like growth attached to a wide base on the right postero-lateral tracheal wall midway between the larynx and the bifurcation of the trachea. This

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Read before the Dallas County Medical Society, Selma, Alabama, June 29, 1945.

1. Fisher, Gilbert E.: Foreign Bodies in the Esophagus and Lower Respiratory Tract, J. M. A. Alabama 13:220-226 (Jan.) 1944.

2. Personal communication from and work with Dr. Edwin N. Broyles, The Johns Hopkins Hospital, Baltimore, Md.

3. Fisher, Gilbert E.: Malignant Tumors of the Trachea, Tr. Am. Laryng., Rhin. and Otol. Soc., 1944.

growth filled approximately 85 per cent of the tracheal lumen. A biopsy specimen, taken at the original bronchoscopic examination, revealed the growth to be adenocarcinoma. This neoplasm was treated by direct electrocoagulation through the bronchoscope, supplemented by roentgen ray therapy. He has been treated on numerous occasions in a similar manner, and was in a state of health which allowed him to carry on his daily work as a proprietor of a grocery business when last seen in 1945. A patient with similar complaint was seen in March 1942. Biopsy revealed a squamous cell carcinoma of the trachea. This man received electrocoagulation and roentgen ray therapy, as did the above mentioned patient, and was able to carry out his work as a farmer until February 1945, when the growth became unmanageable and death ensued suddenly.

Patients undergoing anesthesia frequently experience emesis, and particles of partially digested food may be aspirated. These foreign bodies are extremely irritating and must be removed within a very short time, or severe bronchitis and pneumonitis will develop. This accident occurs most frequently during anesthesia that is being given in labor cases, or in fracture cases where food has not been definitely withheld for several hours prior to the anesthetic.

Patients suffering with postoperative pulmonary atelectasis are frequently seen by the bronchoscopist. The results obtained by aspiration of a thick, tenacious plug of mucus from an obstructed bronchus are usually spectacular. The markedly elevated temperature, pulse rate and respiratory rate generally fall to normal within a very few hours after the obstruction is removed.

All persons suffering from unexplained pain and difficulty in swallowing should be examined with the esophagoscope. If an obstructing tumor is encountered upon examination, a biopsy specimen is easily and quickly obtained for accurate diagnosis microscopically. During the past three years an increasing number of persons have been seen by the writer, complaining of severe dysphagia, accompanied by anorexia, a burning sensation of the tongue and abdominal pain. Superficial examination revealed intense glossitis, stomatitis, gingi-

vititis and occasionally dermatitis⁴. Barium studies of the esophagus of many of these patients revealed single or multiple constrictions of the esophagus. Esophagoscopy revealed an esophageal mucosa which was intensely hyperemic, and small ulcerations were found at the areas of constriction seen on roentgenologic study. These persons obviously presented the esophageal manifestations of pellagra. All have responded readily when treated with thiamine chloride, riboflavin and nicotinamide.

One of the most troublesome lesions found in the esophagus is that of cardiospasm. Many splendid articles on this subject fill the medical literature, and I mention this condition only briefly. I feel these patients should be given the benefit of an esophagoscopy examination in an endeavor to try to eliminate carcinoma at the cardiac end of the esophagus as an etiologic factor. Three patients have recently been seen, all of whom exhibit the classical picture of cardiospasm when studied roentgenologically. However, a biopsy of rather unsuspecting tissue located just inside the stomach at the cardio-esophageal juncture revealed carcinoma to be the etiologic factor in the production of the cardiospasm in each case. When true cardiospasm, uncomplicated by carcinoma, is encountered, much can be accomplished in alleviating the symptoms by repeated dilatations of the spastic area with the aid of a mercury-filled dilator, usually size 42 French. A bland ulcer diet should be fed to overcome the peptic esophagitis so frequently found in the distal esophageal mucosa, and the intravenous administration of thiamine chloride should also be used⁵.

A common, but serious, accident which comes to our attention all too frequently is stricture of the esophagus following ingestion of lye. When these burns are first seen, it has been our policy to insert a soft rubber tube through the nose, down the esophagus, and into the stomach. This is left intact for several days, and an adequate supply of fluids is administered through the tube. The tube is removed on the fourth

4. Fisher, Gilbert E.: Esophageal Manifestations of Pellagra, *Tr. Am. Acad. Opthl.*, Jan.-Feb. 1944.

5. Personal communication with Dr. William D. Stinson, Memphis, Tenn.

or fifth day, and the patient is then examined with the esophagoscope. If there is an area of mucosa which is rather badly burned, dilatations begin daily with the esophageal dilator devised by Dr. Edwin N. Broyles. The patient who has a serious lye burn and resultant stricture is one that elicits sincere sympathy, as the stricture must be dilated at frequent intervals for years.

In recent months the thoracic approach to esophageal and gastric lesions in the region of the cardio-esophageal juncture has vastly increased the range of operative treatment of these lesions. The specific aid of esophagoscopy and biopsy in accurately diagnosing these lesions has contributed largely to the success of surgery.

In closing I would like to state that the major portion of bronchoesophagologic work is still concerned with the removal of ingested and aspirated foreign bodies lodged in the air and food passages. During the last four and one-half years, the writer has had the opportunity to see and remove foreign bodies from over two hundred pa-

tients up to and including June 15, 1945.

Many of these foreign bodies present quite serious problems. An open safety pin lodged in the esophagus, point upward, should always be given the greatest consideration by the operating physician. It should always be kept in mind that foreign bodies of vegetable nature, such as seeds or nuts, should be removed as quickly as possible following aspiration, as they rapidly set up a severe irritation of the bronchial mucosa. Metal foreign bodies may be lodged in the tracheobronchial tree for a protracted period of time without causing serious damage to the mucosa, but may, of course, cause respiratory embarrassment at any time. Generally speaking, the sooner we can see a patient following ingestion or aspiration of a foreign body, the better will be the patient's prognosis.

I have mentioned a few of the routine bronchoesophagologic procedures which can be used each day as an aid to general medicine, and sincerely hope I have stimulated your interest in a branch of medicine which is so extremely interesting to me.

TRAUMATIC CAROTID SINUS SYNDROME FOLLOWED BY IDIOPATHIC EPILEPSY

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MODALITIES

Soma Weiss and Baker are credited with the discovery of the mechanism of carotid sinus syncope. Many investigators have since written, well and exhaustively, on this subject and have described three syn-copal modalities as follows: 1. The vagal modality with slowing of the heart, diminution of blood flow to the brain, with resultant anoxemia and appropriate symptoms, and occasional asystole; 2. The depressor modality with decrease in arterial blood supply; and 3. The cerebral modality with disturbed hypothalamic functions¹. It has been postulated that one carotid sinus is concerned with the cerebral modality and the other with the other two modalities. However, this has not been generally ac-

cepted and it does not appear likely that such a sharp delineation is feasible.

Carotid sinus syndromes may occur in individuals with overly sensitive carotid sinuses either spontaneously and/or by induced means. In the spontaneous attacks the causative mechanisms repose in the normal circulatory changes incident to movement and changes of position, or in the natural chemical changes of the arterial blood with respect to carbon dioxide and oxygen tensions. Induced means would include mechanical stimulation by artificially applied pressure or by the contracting action of scar tissue resulting from trauma or disease processes. Tumors in or near the sinus may also cause attacks.

FUNCTIONS

As is well known, the carotid sinuses, along with other structures, have the normal function of equalization and regulation

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1. Bing and Haymaker: Textbook of Nervous Diseases, 5th Ed. p. 536.

of arterial blood pressure. They respond to both chemical and mechanical stimuli in their regulation of cardiovascular and hypothalamic functions. This is reminiscent of an old and widely used treatment for paroxysmal tachycardia in which vagal stimulation is employed by applying pressure either to the eyes or to the region of the carotid sinus. Under abnormal conditions either or both of the sinuses may become overly sensitive, resulting in the establishment of a clinical carotid sinus syndrome.

ANATOMY

The carotid sinus nerve has its origin in the aggregation of nerve endings (menisci) which makes up the carotid plexus at the bifurcation of the common carotid artery. The nerve is afferent and soon bifurcates, one division traveling with the vagus and the other with the glossopharyngeal to the medulla where there are nuclear connections.

INCIDENCE

True carotid sinus syndromes are reputedly rare but the writer has seen three within a comparatively short time. In his opinion they are probably somewhat more common than is generally supposed.

STERN'S SIGN

J. Edward Stern has described a procedure in which the carotid sinus is massaged for a period of from five to thirty seconds with the patient standing erect. If the sinus is overly sensitive, symptoms of the cardiac and/or the depressor modalities will appear, or the cerebral modality will become evident. In case of the latter it is not unusual to observe depressor and cardiac symptoms concomitantly. It is emphasized that both sinuses should never be stimulated simultaneously as this could result in a so-called "functional Stokes-Adams" reaction with heart block and fatal results.

PSYCHIC COMPLICATIONS

The nature of the test for Stern's sign is ideal for the production of psychoneurotic symptoms of a type which may duplicate that of one or more of the carotid sinus modalities. In general it may be assumed that, in the absence of other psychoneurotic stigmata, a positive Stern's sign is indicative of an active clinical carotid sinus syndrome.

PROCEDURE FOR DIFFERENTIAL DIAGNOSIS

In psychoneurotics or in other doubtful cases, injection of the sinus with a one percent solution of procaine will eliminate all factors except those of a psychoneurotic nature. If a small calibre needle is used, there is no danger in the procedure even if the artery is penetrated.

OCCUPATIONAL ASPECTS

For obvious reasons the military and vocational aspects of carotid sinus syndromes are of considerable importance. Stern's sign should be tested for in all military applicants and in applicants for work which involves machinery, heights or rapid motion. It is a simple and easily performed test and only requires a few seconds.

SURGICAL PRECAUTIONS

All individuals on whom major surgery is contemplated should also be given the test. Bending the neck or manipulating the head of the patient in the process of administering general anesthesia is occasionally the cause of a marked drop in arterial blood pressure in patients who have overly sensitive carotid sinuses. In such patients it is advisable to give a somewhat larger dose of atropine preoperatively than is ordinarily employed. Care should also be exercised by the anesthetist to avoid unnecessary and unusual movement of the patient's head which might throw undue pressure on the sinuses.

THERAPY

Treatment is the same for both cardiac and depressor modalities of the syndrome and consists of the exhibition of pressor drugs such as ephedrine, atropine, benzedrine and adrenalin. For the cerebral modality general measures are advised. They include avoidance of emotionally disturbing situations and of collars which fit tightly around the neck. Barbiturates should be tried in these cases but should be avoided in the first two modalities and where there are admixtures of the cardiovascular modalities. The surgical treatment consists of cutting the carotid nerve. This is usually followed by a sharp rise in blood pressure² which lasts for several days and therefore limits the procedure to individuals in whom this would not be contraindicated.

2. Bucy, P. C.: The Carotid Sinus Nerve in Man. Arch. Int. Med. 58: 418. 1936.

CASE REPORT

W. B. A. This patient is a 43 year old white male of American ancestry. He was born in California on Sept. 4, 1901. As a civilian he was a fruit farmer operating his own apple orchard in northern California. He had been happily married for many years; his wife died on Aug. 8, 1944. The union was not productive of progeny. He denies any chronic or recurring type of illness prior to enlistment. On June 15, 1943 he enlisted in the U. S. Naval Reserve as a Chief Machinist's Mate and reported for active duty on the same date in San Francisco, California. His service includes about eight months of sea and overseas duty and participation in active combat in the invasion of France.

In December of 1943 the patient accidentally struck the left angle of his jaw on the jagged edge of a pontoon. There was considerable difficulty in accomplishing hemostasis but he did not seem to be affected in any other untoward way. A few weeks later brief attacks of vertigo began to occur. They were only of a few seconds' duration but subsequent feelings of malaise and dizziness persisted for minutes to hours. Within a few months the attacks had become infrequent but in March of 1944 he was in a truck which turned over. He was not injured seriously but was observed walking around in circles and "not fully competent." Following this there was a return of his old attacks of dizziness of the same frequency as before. In June of 1944 he had a severe attack of vertigo and, as a result, fell striking his head on the deck of a barge. He suffered no obvious injury but was completely unconscious. No convulsive movements were noted at that time. Since then his attacks have persisted. The cerebrospinal fluid was examined and found to be completely negative. Air encephalograms failed to reveal any lesions. Ventriculograms were negative.

He was evacuated to the United States. On Sept. 29, 1944 he was admitted to the U. S. Naval Hospital, St. Albans, N. Y., with the diagnosis of hematoma, traumatic, subdural, chronic, complaining of "spells." He was transferred and admitted to the U. S. Naval Hospital, Oakland, California, on Nov. 6, 1944.

At this hospital the general physical examination revealed the following:

A well developed and moderately obese white male appearing to be of stated age, in no acute distress and apparently in good health.

Head: Tenderness posterior to the angle of the mandible and just below the left ear. An irregularly stellate cicatrix here, residual of his accident in 1943. The jaw is prominent, has the appearance of prognathism.

Eyes: Pupils are small, react to light and accommodation. Ocular fundi: Normal.

Nose and throat: Normal. Ears: Normal. Neck: Normal.

Lungs: Clear to percussion and auscultation. Heart: No enlargement, irregularities or murmurs. Blood pressure 110/90. Pulse 60.

Abdomen: Difficult to palpate, no masses.

Extremities: Normal. Reflexes: Biceps, triceps, knee and ankle jerks, and abdominals normal. Abnormal reflexes: None.

The patient is pleasant, cooperative, intelligent, well oriented, and rational in all respects.

During the physical examination he had an attack. Its duration was between three and five seconds. He was lying on the examining table at the time. His whole body became tense with tonic muscular spasm, and the eyes were staring straight ahead. The heart was checked immediately and the sounds were very soft, the rate quite slow, and the rhythm regular. (Interne's observation.) During the attack he had a "blackout" but did not completely lose consciousness. Following it he was quite dizzy and could only stand with assistance. After this attack the patient stated that it was typical of those he had been having. Preceding them he has no aura, no dyspnea, cough, chest pain or visual disturbances. He stated that lying down with his head forward, as on a pillow, would usually cause him to become dizzy but would not bring on his seizures. Turning his head sharply to the side did not precipitate a seizure or cause dizziness.

During the period of observation he averaged five or six seizures daily. Dilantin therapy was begun and there was complete cessation of the attacks. However, vertigo was still present. After four weeks of dilantin therapy the schedule was discontinued and the seizures returned in the same frequency and intensity as previously. They were again completely controlled when the treatment schedule was reinstituted.

On Jan. 22, 1945 an electroencephalogram was done and the record revealed a generalized paroxysmal dysrhythmia of non-

specific type compatible with a convulsive susceptibility of severe degree. A grand mal type of tracing was recorded during the procedure.

A glucose tolerance test was done on Nov. 30, 1944 and results were within the bounds of normalcy. Roentgenologic examination of the skull on November 30, 1944 revealed no evidence of injury or intracranial disease. There was no calcification of the pineal body.

On January 26, 1945 the diagnosis was changed to epilepsy, the man was given a medical survey, and discharged from the Service on March 1, 1945.

DISCUSSION

A case has been presented in which the coexistence of idiopathic epilepsy and a carotid sinus syndrome has been shown. The injury behind the left angle of the mandible was fairly deep and required subcutaneous as well as cutaneous suturing. Operative repair was followed by a considerable amount of oozing hemorrhage and local swelling due to hematoma. Healing was not by primary intention. It is reasonable to assume that the healing process was followed by the formation of cicatricial tissue which placed contracture pressure on the left carotid sinus region. This, in turn, resulted in the development of an irritable or sensitive reaction of the sinus.

Per se, carotid sinus irritability on a traumatic basis is not extremely rare. The subsequent development of idiopathic epilepsy does appear to be significant. In a man 43 years of age it is quite unusual to see this type of epilepsy appear for the first time. There can be no doubt that this was a latent type of case, or epilepsy tardens. The electroencephalographic record did not reveal any evidence of a focal lesion, thus ruling out an etiology of trauma. Reichardt's work is pertinent at this point. He concluded that cerebral concussion does not cause nor aggravate idiopathic epilepsy.

It is pointed out that in the accident of June 1944, when the man fell, in one of his attacks of vertigo, and struck his head on the deck rendering himself unconscious, no convulsive movements were noted. The man had been in the Service for some six months at the time of the first accident and no seizures were observed during that time.

He steadfastly denied that he had previously experienced any seizures.

It is of prognostic interest to note that while the electroencephalogram recorded a grand mal type of attack during the test, the seizures are clinically petit mal in character. In them the patient does not lose consciousness, bite his tongue, or become incontinent. The attacks are of brief duration.

This patient had a blood pressure of 110/90, a pulse pressure of only 20, and a pulse rate of 60. On stimulation of his carotid sinus, either by massage or bending his head forward, the pulse and blood pressure were reduced, by varying degrees, even further, and vertigo was induced.

Previously generally accepted work by numerous investigators postulates the idea that cerebral anemia, or at least anoxemia, precedes idiopathic convulsive seizures. Lately the work of Penfield et al. tends to show that a cerebral hyperemia precedes and accompanies idiopathic seizures. The modus operandi of carotid sinus syndromes involves cerebral anemia and anoxemia. According to the work of Penfield, this mechanism would be the antithesis of that which obtains in idiopathic epilepsy. However, there is considerable disagreement on the latter point, and it is possible that the causative mechanisms are physiologically closely related or at least in some way interdependent in this case.

CONCLUSIONS

1. That carotid sinus syndromes may be produced traumatically.
2. That these and other syncopal syndromes may at times only be differentiated by electroencephalography and by the above described injection procedure. (Vide supra.)
3. That it is likely that latent idiopathic epilepsy may be activated by the development of an active carotid sinus syndrome.

SUMMARY

1. A brief discussion of carotid sinus syndromes is presented.
2. A case of traumatically induced carotid sinus syndrome is described.
3. A case of coexisting idiopathic epilepsy and carotid sinus syndrome is described.
4. The question of etiologic relationship between idiopathic epilepsy and carotid sinus syndrome is posed.

CULTURAL EXAMINATION FOR MYCOBACTERIUM TUBERCULOSIS

RESULTS IN A PUBLIC HEALTH LABORATORY OVER A FOUR-YEAR PERIOD

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In the light of growing knowledge of acid-fast bacteria, it immediately becomes evident, as indicated by Whitehead¹, that simply finding acid-fast organisms in stained smears is by no means definitive in the laboratory diagnosis of tuberculosis. The biologic relationship between the tubercle bacillus and the so-called "saprophytic" acid-fast bacteria is not fully understood. Morphologically, tinctorially and chemically they are similar. Only in their pathogenicity do they differ.

Saprophytic acid-fast organisms are widely distributed in the environment—various studies having shown them present in the soil, and on foodstuffs in contact with the soil as pointed out by Baldwin², and in tap water. Non-pathogenic acid-fast bacilli have likewise been demonstrated with considerable frequency in sputum, gastric washings, feces and urine. They are also often found on the skin. Possibly the reason that they are not found more frequently in sputum is that they are at that time in non-acid-fast stages of their growth cycle.

The fact that sputum examinations by ordinary smears on slides fail to reveal acid-fast organisms should, therefore, make one cautious in concluding that such organisms are not present, without attempting to cultivate them. Studies such as those of Ebersson and Sweeney³ and Kahn and Nonidez⁴ have

shown they doubtless pass through a non-acid-fast stage in growing and come to full development only under the most favorable condition. Failure to demonstrate non-acid-fast forms in culture may be explained on the grounds that it is customary in most laboratories to examine cultures after three to six weeks incubation, at which time the non-acid-fast types may have diminished considerably.

Corper⁵ estimates that at least 100,000 organisms per cubic centimeter of specimen must be present in order for them to be detected on direct smear; whereas, but 40 per cubic centimeter can be detected by culture.

Cultural methods are not practical as a routine procedure in a public health laboratory as they are time consuming and expensive. Too, in the opinion of Hirschberg⁶ if the condition of the patient indicates to the physician the pathogenicity of the "unknown" causative organism, a quick laboratory report based on the microscopic demonstration of an acid-fast bacillus morphologically resembling the tubercle bacillus is of more value than a belated report of a pathogenicity test. Therefore, cultures are not encouraged in the Laboratories of the Alabama State Department of Health except in those cases which are clinically puzzling.

Since April 1, 1941, cultural examinations of seven hundred and twenty-three specimens have been made. The specimens included sputum, pleural, ascitic, and spinal fluids, gastric washings, urine, pus and fluids of undesignated nature.

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1. Whitehead, H. G.: Cultural Methods in the Diagnosis of Tuberculosis, *Am. Rev. Tuberc.* 39: 540, 1939.

2. Baldwin, E. R.: Nonpathogenic Acid-Fast Bacilli, *Am. Rev. Tuberc.* 45: 756, 1943.

3. Ebersson, F., and Sweeney, M. A.: Tinctorial Transmutations of Acid-Fast Micro-Organisms and Virulence of Tubercle Bacilli, *J. Infect. Dis.* 49: 303, 1931.

4. Kahn, M. C., and Nonidez, J. F.: The Role of Non-Acid-Fast Rods and Granules in the Developmental Cycle of the Tubercle Bacillus, *Am. Rev. Tuberc.* 34: 361, 1936.

5. Corper, H. J.: The Certified Diagnosis of Tuberculosis. Practical Evaluation of a New Method for Cultivating Tubercle Bacilli for Diagnostic Purposes, *J. A. M. A.* 91: 371, 1928.

6. Hirschberg, Nell: An Evaluation of Three Methods for the Demonstration of Tubercle Bacilli for Use in Hospital Routine, *J. Lab. & Clin. Med.* 19: 429, 1934.

In preparation for culture—where indicated—the specimen was mixed with N/1 NaOH and allowed to digest in the incubator at 37° C. for thirty minutes. Digestion was used, not to increase the number of organisms, but to prepare the material for satisfactory culture. At the end of thirty minutes digestion, the specimen was centrifuged for fifteen minutes, at 2,000 rpm, the supernatant fluid discarded and the sediment neutralized with N/1 HCl, using brom-thymol blue as the indicator. Neutralization of the digestant is necessary because prolonged exposure to alkalis is detrimental to acid-fast organisms.

Before attempting cultivation, a smear made from the sediment was stained by the Ziehl-Neelsen method and examined for acid-fast bacilli. If found present, a report was made saying “positive for acid-fast bacilli morphologically resembling the tubercle bacillus” and the specimen discarded. If no acid-fast organisms were found, the specimen was cultured.

The choice of culture media is considered to be a most important factor in the isolation of *M. tuberculosis*. The medium must provide some combination of the ingredients: carbohydrates, fats, proteins and minerals in the form of egg, milk, potato, glycerol and serum, or amino acids. Recently some type of dye, such as crystal violet or malachite green, has sometimes been added in minute amounts as a bacteriostatic agent against common contaminants. These dyes, according to Corper and Uyei⁷, possess the added advantage of making the detection of the colonies of *M. tuberculosis* on the medium easier by giving a contrasting background to the bacterial growth.

In routine laboratory examinations, it is obviously impossible to employ a large variety of culture media. A previous study had proved that Corper's potato medium and Petraghani's potato-egg medium gave the best results in this laboratory. These media contain the ingredients mentioned above as necessary for optimum growth. The former contains the dye crystal violet, the latter, malachite green. A screwtop vial

as suggested by Corper⁸, of approximately 35 cc. capacity, was used for the culture medium, the washer in the top being replaced with a cork pad. This allowed for a readily accessible supply of air and gaseous exchange throughout the incubation period. At the same time, evaporation of liquid from the medium was minimized and no contamination allowed from outside sources.

Three drops of inoculum were allowed to run slowly down the slant, the tube being gently rotated during the process. The inoculated vials were then allowed to lie in a slanting position at room temperature overnight to facilitate adherence of the inoculum to the surface of the medium. The cultures were subsequently incubated at 37° C. for a minimum of six weeks but were examined macroscopically weekly and microscopically whenever a suspicious colony appeared. Detailed records were kept, noting the presence or absence of suspicious growth, contaminants, or tubes discarded due to overgrowth of contaminants.

Whenever a culture had developed sufficient growth of an acid-fast bacillus, guinea pig inoculations were performed. Two animals were inoculated, one intracutaneously and the other subcutaneously. Unless an animal died, autopsy was not done under four weeks. Forty-eight hours before autopsy, the guinea pigs were given a tuberculin test. An animal was considered positive if, in addition to a positive tuberculin test, gross lesions characteristic of tuberculosis were found on autopsy and acid-fast bacilli morphologically resembling *M. tuberculosis* were demonstrated in smears from these lesions.

Of the 723 specimens cultured, as shown in Table I, 611 proved negative for acid-fast organisms microscopically on the original examination and also on subsequent culture, while 112 yielded cultures of acid-fast organisms when examined microscopically. Of these 112 specimens, 84 gave positive cultures which on guinea pig inoculation produced characteristic lesions of tuberculosis. On the other hand, 28 of the 112, though microscopically and culturally positive, failed to produce any pathology in

7. Corper, H. J., & Uyei, Nao: The Cultivation of Tubercle Bacilli. An Improved Method for Isolation from Tuberculosis Materials, *J. Lab. & Clin. Med.* 13: 469, 1928.

8. Corper, H. J.: A Simple Procedure for the Diagnostic Culture of Tubercle Bacilli, *J. Lab. & Clin. Med.* 23: 1195, 1938.

guinea pigs. As a check on the original observations, 15 of these 28 apparently non-pathogenic cultures were re-inoculated into guinea pigs but again the test animals failed to show any pathology and were likewise tuberculin negative.

TABLE I
TOTAL NUMBER OF SPECIMENS EXAMINED WITH
RESULTS OF MICROSCOPIC, CULTURE
AND GUINEA PIG TESTS

Total No. of Spec- imens Exam- ined	Number Micro— Cul- ture—	Number Micro+ Cul- ture+	Number Micro+ Cul- ture+ Guinea pig+	Number Micro+ Cul- ture+ Guinea pig—
723	611	112	84	28

The types of specimens together with the results of microscopic examinations, cultures and guinea pig tests as related to the various kinds of specimens are shown in Table II.

Of particular interest are the 28 specimens which were microscopically and culturally positive but negative on guinea pig test. Ten of these non-pathogenic acid-fast cultures were from sputum, nine from gastric washings, three from urine, two from pleural fluid and one from ascitic fluid. Three were from specimens unidentified by the physician.

TABLE II
RESULTS OF MICROSCOPIC EXAMINATIONS, CULTURE AND GUINEA PIG TESTS AS RELATED TO THE TYPES OF SPECIMENS EXAMINED

Type of Specimen	Micro+ Culture+ Guinea pig+	Micro+ Culture+ Guinea pig—	Micro— Cul- ture—
Pleural fluid	38	2	150
Gastric washings	16	9	84
Sputum	18	10	171
Urine	6	3	130
Spinal fluid	2		23
Fluid—kind not designated	2	3	15
Pus	2		34
Ascitic fluid		1	4
Total	84	28	611

In the literature, when cultures proved positive, few investigators seem to have thought it necessary to determine the pathogenicity of these acid-fast organisms by ani-

mal test³. Our results, as noted above, have shown that such an assumption as to pathogenicity is far from justified, however, as we found 25 per cent of the positive acid-fast cultures to be non-pathogenic. Particular point was given to this observation when on two separate occasions *non-pathogenic cultures* only were recovered from gastric washings of a convalescent patient in a tuberculosis hospital. Likewise, in another patient, both non-pathogenic and pathogenic cultures were obtained from the same specimen. The great drawback, then, to reliance on the cultural method alone is that it provides no proof the acid-fast organisms which have been cultivated are really *M. tuberculosis*. Therefore, it should be emphasized that no acid-fast bacillus obtained on culture—especially in a public health laboratory—should be reported as the *tubercle bacillus* until it has been finally identified by animal inoculation.

SUMMARY AND CONCLUSIONS

1. In the study of 723 specimens, 611 were microscopically negative and culturally negative for acid-fast organisms.
2. One hundred twelve specimens yielded cultures of microscopically positive acid-fast organisms.
3. Eighty-four of the 112 specimens were culturally positive for acid-fast organisms which produced typical pathology of tuberculosis in guinea pigs.
4. Twenty-eight of the 112 specimens yielded cultures positive for acid-fast organisms which failed to produce any pathology when inoculated into guinea pigs.
5. Dependence cannot be placed in culture appearance to distinguish between pathogenic and non-pathogenic acid-fast cultures.
6. In view of the fact that 25 per cent of the acid-fast cultures recovered proved to be non-pathogenic it would appear unsafe to stop short of animal inoculation in attempting to diagnose the presence of *M. tuberculosis* in specimens submitted to a public health laboratory.

ANNUAL MEETING
OF THE
ASSOCIATION
BIRMINGHAM
APRIL 16-18, 1946

RECENT PROGRESS IN PLANNED PARENTHOOD

EVA F. DODGE, M. D.
Little Rock, Arkansas

Planned parenthood is a name for fertility control which was finally decided upon after several years. Birth control was one of the first names to be given to the control of pregnancy. Control was interpreted to mean regulation. Birth control though was often misinterpreted. Other words appeared in the literature, such as contraception, pre-venception and child spacing, in an attempt to find a word which would have a better acceptance, but none of these seemed to give the overall meaning as well as did planned parenthood.

Planning for parenthood may involve temporary use of contraceptives or it may necessitate examinations to determine the cause of an apparent infertility. Thus, this more comprehensive name shows interest in the control of fertility—that is, help in regulating pregnancies for healthy mothers and babies, in those who can have children; help for those who want children and apparently cannot have them; and thirdly, to assist in marriage counselling.

Ancient writings show evidence of the use of contraceptive measures. The Petrie papyrus dated B. C. 1858 contained certain contraceptive recipes. Soranus (93-138 A. D.) devotes a section of his gynecology to "Measures to Prevent Conception," among them being occlusive medicated forms of protection. During the middle ages Thomas Aquinas condemned birth control so specifically that his views would seem to indicate that the practice flourished in his day.

Early in the 19th Century articles on population problems and the control of births began to appear. The first birth control clinic in the world was opened in 1878 in Amsterdam, Holland by Dr. Aletta Jacobs.

Margaret Sanger, a nurse, in 1912 realized that women should be given scientific methods of contraception to regulate their pregnancies if there were to be well mothers and well babies. She opened the first clinic in the United States in 1916, which was closed almost at once. The first permanent clinic was opened in New York City in 1923 under the direction of the Birth Control Clinical Research Bureau, a woman physician being in charge of the clinical service.

As early as 30 years ago certain outstanding members of the medical profession were advocating contraception as a part of medical practice, for Drs. Abraham Jacobi and William J. Robinson called a meeting at the New York Academy of Medicine which aroused the medical profession to the importance of birth control. It was not until 1930, though, that the New York Academy of Medicine passed a resolution favoring birth control. During this year nearly a hundred national, regional and local groups in medical, educational and religious fields passed similar resolutions.

Dr. William Allen Pusey, President of the American Medical Association, in his presidential address in 1924, urged the necessity of contraceptive work; and in 1925 the Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association passed a resolution recommending the alteration of laws to allow physicians to give contraceptive treatment.

Medical acceptance and progress in the establishment of clinics for the low income group were very slow, and in 1930 only 31 centers were in operation. Several things contributed to this slow development. The inherent hesitancy of the medical profession to accept new and controversial methods of treatment and the fact that most physicians were aware of the unfavorable federal and state laws, the interpretation of which, during the early years, made it illegal to receive or send information and supplies through the mails.

The recent marked advance in the field of planned parenthood and contraception can be dated from the decision handed down by the Second Circuit Court of Appeals in 1936 which read an exception to the Federal Statutes (Comstock law of 1873) that permitted physicians the right to import and employ things which might be used for the purpose of saving life and promoting the well being of their patients (note U. S. v. one pkg. Hannah M. Stone, Claimant 86 F. (2nd) 737, 739 C. C. A. 2nd, 1936). Over half of the states have laws ranging from outright prohibition to salutary attempts to assure better products by licensing. There

are now only two states, Massachusetts and Connecticut, where the law makes it illegal for physicians to give contraceptive advice and in Connecticut the law also prohibits the use of any device for the prevention of conception. In all the other states there are either no laws or they can be interpreted to exempt physicians who give contraceptive advice to protect the health of mothers and babies.

The next year, 1937, the American Medical Association approved and unanimously adopted a report of its committee which had studied contraceptive practices and allied problems. This meant the acceptance of birth control as an integral part of medical practice and education.

Following the precedent set by the American Medical Association during the next five years, a large number of national, state and county medical societies passed resolutions approving contraceptive practices, pointing out the many indications and endorsing contraceptive measures when protection of the health of mothers and children was indicated.

The Medical Association of the State of Alabama, at its annual meeting in 1938, was among the first to follow in the steps of the American Medical Association in making a formal approval of contraceptive practices. Since then, 13 other state medical associations have passed similar resolutions. During this same period over 400 clinics were founded, nearly double the number established in the previous 14 years.

The establishment of clinics continued to grow yearly until they reached nearly 800, but there had to be a curtailment of activities in certain areas due to war conditions. In 1944 there were 617 active clinics, 251 public health units, 262 extramural clinics (not connected with either hospitals or public health units), and 65 hospital clinics, the remainder conducting referral services until clinicians returned from the Armed Services.

Child spacing service has become an integral part of maternity care in six state health departments since 1937 when North Carolina pioneered by being the first state to provide this service in its public health program. South Carolina followed in the steps of her northern sister in 1938 and Alabama in 1940. Since then, Florida, Texas

and Mississippi have added this service to their maternity care programs.

The Industrial Hygiene Division of the U. S. Public Health Service, realizing the value of child spacing in helping to keep women well, has in its outline of an Industrial Hygiene Program, under the heading "Personal Problems," the following statement:

"The Counselor should refer married women workers with special problems to the medical service or a private physician for advice on the proper spacing of children as a means of protecting the health of the mother and her children."

In 1942 the Council on Medical Education and Hospitals of the American Medical Association voted at its annual meeting "that it is desirable for medical schools to include in the curriculum for medical students adequate instruction in human fertility." Two-thirds of the grade A medical schools now include some instruction in conception control. While the type and amount of the instruction may still be inadequate in some instances, in others the students receive good training.

The Council on Pharmacy and Chemistry of the American Medical Association, at its meeting in 1942, declared contraceptives eligible for consideration on the same basis as therapeutic agents. Reports are now appearing from time to time in the Journal of the Association, under the Council on Pharmacy and Chemistry giving the results of the evaluation of contraceptives.

Planned parenthood has been receiving increasing support and approval of the church in statements endorsing the use of measures for the prevention of contraception for the welfare of mothers and children. Under these conditions it is considered to be ethical and moral.

The booklet on the "Safe Period," which was published with "ecclesiastical approbation" and must therefore be considered to be, at least, not contrary to the teachings of the church, recognizes the medical as well as social needs for family planning and family limitation. The approval of the use of the "safe period" for the prevention of conception shows that there has been an acceptance of the principle that sex relations in marriage are moral even though no conception can follow the act. In discussing the

good that may follow the prevention of conception through use of the "safe period" the author* states: "Burdens that test human endurance to the utmost limit, to which all too many succumb, will be lightened. I speak of economic burdens of poverty, of inadequate income, of unemployment which make it impossible for parents to give their children and themselves the food, the clothing, the housing, the education and the recreation they are entitled to as children of God. I speak of physiological burdens, the burdens of depleted physical energies and exhausted vitality resulting from a previous birth or miscarriage, the burden of chronically or temporarily adverse conditions of the heart, the kidneys, or other organs, or of conditions that threaten the life of the mother in case of pregnancy. I refer to psychic burdens, not infrequently more difficult to bear than any I have so far mentioned, burdens of uncontrolled fear,

*Latz: *The Rhythm of Sterility and Fertility in Women* (6th ed. 1942).

anxiety, irritability, of rebellion against God and His Church for seeming to make demands beyond human nature, beyond human powers to endure."

While there may be a difference of religious opinion regarding methods that may be morally employed for the control of conception, it can be seen that the medical and social needs for voluntary control of human fertility are accepted by all religious faiths. The National Clergymen's Advisory Committee of the Planned Parenthood Federation of America now consists of over 1000 leading clergymen from nearly every state and almost every religious denomination.

Thus, it can be seen that the recent progress made in the acceptance of planned parenthood by the religious and educational professions, as well as the medical, shows a recognition of the change in biological thinking based on the many advances in knowledge of the human body, mind and spirit, which marks another step in our progress toward a healthier and better country.

CONTINUOUS CAUDAL ANESTHESIA

RECORD OF EXPERIENCE IN NINETY OBSTETRIC CASES

H. L. ROGERS, M. D.
Albertville, Alabama

The results obtained by me in ninety obstetric cases, using the technique of continuous caudal anesthesia as brought out by Hingson and Edwards in 1942, have been very gratifying to me for my own efforts and especially so to the parturients to whom it was given.

In this series of cases I have had no maternal complications and one stillbirth. The stillbirth was in a case of a primipara in which, after a long labor, the fetal heart tones stopped during the second stage of labor, supposedly due to compression of the cord. The baby was delivered shortly thereafter with forceps but efforts at resuscitation failed.

Eighty-nine cases were cephalic presentations and one was a breech. Of the eighty-nine cephalic presentations, twelve were in a posterior position when the head reached the perineum. The length of time that the anesthesia was used averaged about six hours, fourteen hours being the long-

est time in any one case. Seventy-eight cases were primiparas and twelve were multiparas. The technique as given by Hingson and Edwards has been followed and the apparatus devised by them has been used in all cases.

Before starting the anesthesia it is imperative that full details of the case be known. Contraindications are placenta previa, disproportion of the child to the pelvis, uncontrollable hysteria, and any infection of the skin in the sacral or coccygeal area. Also, after inserting the needle into the sacral canal, should the subdural space be entered, the procedure must be discontinued.

In this series of cases, I have had four failures. These failures were characterized by the fact that no analgesia was obtained and that the sacral canal was not entered by the needle. Two of the patients had a thick layer of subcutaneous fat covering the sacral region. In all four patients an injection tumor could be felt denoting that the

anesthetic material did not enter the caudal canal. I have had no cases in which the needle has entered the subarachnoid space due to an abnormally low dural sac.

One and one-half percent metycaine in physiologic saline has been the anesthetic agent used. Two of the patients had organic heart disease characterized by a systolic apical murmur and a moderate degree of enlargement. In both there was satisfactory compensation. Six cases were mildly pre-eclamptic. There have been no cases of eclampsia.

Continuous caudal anesthesia should be used to relieve the patient of pain only after the pains are well established and there is dilatation of the cervix of from 3 to 4 centimeters. It is not advisable to start the procedure until progress is being made in dilatation and effacement of the cervix. If the pains are severe and very little if any progress is being made, I think it advisable to give the patient a hypodermic of morphine and wait until the cervix begins to dilate. By waiting until then, the patient is able to have bathroom privileges and change her position at will.

At the desired time to start the anesthetic, the patient having had an enema, she is placed on either side and the legs drawn up with the knees flexed. At this time it is well to feel the soles of her feet, and note the temperature of them. This is valuable in determining whether analgesia will follow the injection, as will be seen later. The skin over the sacral and coccygeal regions is then cleansed with soap and water, painted with an antiseptic, and the area draped with sterile towels. The tip of the coccyx is then palpated and the sacral hiatus found. This is found with difficulty on some people. The skin over the sacral hiatus and the sacro-coccygeal ligament are anesthetized. The special malleable, stainless steel, 19-gauge needle is then inserted into the sacral canal for a distance of one to two inches. Should spinal fluid be obtained on aspiration, it is imperative to stop the procedure, as it is known that the needle is in the subdural space. Should blood be aspirated, which quite often happens, then the bevel of the needle should be moved for a distance of a few millimeters until no blood is obtained and the injection be made carefully. To be doubly sure the needle is not in the subdural space, a test injection of 8 cc. of the solution

is made and a wait of ten minutes is necessary to see if a low spinal anesthesia ensues. No harm has been done should this result be obtained as the amount of anesthetic agent injected has been small. Should the bevel of the needle be in the subdural space, failure to apply this test would result in an overwhelming anesthesia. I have not encountered a patient with an abnormally low dural sac although this procedure must be uniformly carried out.

With the palm of one hand placed squarely over the sacral region, 30 cc. of one and one-half percent metycaine is then injected. Should the needle be outside the sacral canal, an injection tumor will be felt due to the pooling of the solution beneath the skin. The needle must then be withdrawn and the procedure repeated. Should the needle be in the correct position, and if care is not taken to inject the solution slowly, then the patient will complain of slight pain in each hip and extending down each leg. This pain subsides almost immediately upon decreasing the rate of injection. You are almost certain to know that the needle is in the correct location when this pain occurs. Within five minutes of this injection, the soles of the feet will feel warm to the touch, and the patient will say that her feet feel slightly numb. There is then a progressive loss of sensation to pain in regions supplied by the coccygeal, hemorrhoidal, perineal, pudendal, ilio-inguinal and ilio-hypogastric nerves. Within ten minutes after the injection, the soles of the feet are warm and flushed, there is cessation of sweating of the feet, and the patient feels a slight numbness in both legs, although she is able to move them. There is absence of pain to needle prick in the anal area, and the patient feels a little more relaxed. At this time she is hopeful, although doubtful that the pain will cease. By the end of fifteen minutes she will notice that the last pain was considerably less severe. She is greatly relieved and considerably more relaxed. She is grateful to you when you feel of her abdomen and tell her she is having a hard uterine contraction and she replies that she does not feel the pain.

If there is not complete relief of pain at the end of twenty minutes, and quite often is it true that the patient has light pain on the opposite side from which she is lying,

then an additional 20cc. of solution is injected. If there is no relief from pain at the end of thirty minutes, then it is best to remove the needle and start the procedure over. It is possible that there have been aberrant fibers that have not been blocked. However, it is most likely that the bevel of the needle is not placed sufficiently high in the caudal space, or if in the canal at all.

The needle is then fixed in place and padded well to prevent contamination of the puncture wound. She is not conscious of the needle being present. The patient is then instructed to tell at the earliest moment when she feels the pains return. Then another injection is made of 30 cc. of solution. She is then relieved of all subsequent pains by injecting 30 cc. solution every forty minutes. By waiting until the pains return, one has an idea of the patient's ability to decompose the drug.

I think it is best to let the patient lie as long as she comfortably can on her side. Although the needle is not likely to break, due to its composition, there is less likelihood of this accident happening. The blood pressure should be checked before and after each injection as there is occasionally a slight drop in blood pressure after the injection. In this series of cases, I did not encounter any serious fall in blood pressure in any patient. Occasionally nausea is experienced by the patient. I think it is advisable for the patient to drink fluids freely and partake of only liquid nourishment unless the anesthesia is continued over six hours. Then a semi-solid meal may be taken. It is necessary to catheterize the patient every four to six hours. Movement of the lower extremities is diminished, although at all times she is able to move her feet. Rectal examinations are made, causing no pain to the patient, and it is found that the muscles about the birth canal are markedly relaxed. This relaxation greatly shortens the duration of the second stage of labor and allows the baby to descend to the perineum with a minimum of trauma to the fetal and maternal parts. The patient is allowed to remain in her room until the presenting part reaches the perineum. Then she is taken to the delivery room with the needle in place and injections are continued until she is ready to return to her room.

During the delivery the patient is instructed when to strain to her contractions. She

has no spontaneous desire to bear down. There is absolutely no pain during the delivery of the baby when the correct level of anesthesia is maintained. By allowing sufficient time, and aiding when necessary in internal rotation, the presenting part will slightly bulge the perineum. Fetal heart tones should, of course, be checked after each contraction of the uterus at this stage. In my experience, it is best at this time to apply outlet forceps. If one is an adept in using them, there should be no reason for injury to the child as very little traction is necessary. If indicated, an episiotomy should be done. There is no pain when the episiotomy or the repair is made. Bleeding is at a minimum, and I have had no case of postpartum hemorrhage. Management of the third stage of labor is to let the patient bear down and with gentle help expel the placenta. I have had no case in which the manual extraction of the placenta has been necessary. When the patient returns to her room a hypodermic of morphine is given, if needed, at the end of about forty minutes after discontinuing the anesthetic. The patient lacks the signs of extreme exhaustion so frequently seen after childbirth.

I think that continuous caudal anesthesia, when used in selected cases, and with all necessary precautions taken, is safe. It is certainly painless. There is no doubt but that the chance of birth injury to the baby is considerably less than without it. The baby starts to breathe sooner and with less difficulty due to the absence of depressing drugs, and the period of convalescence for the mother is shortened.

It is with pride that we can point to a native Alabamian, Dr. Robert A. Hingson, as a co-worker in originating this technique.

The Cardiac Glycosides—It is generally agreed that the ideal digitalis preparation for clinical use would be a pure chemical compound of known composition, reliable potency and low cost which would be readily and uniformly absorbed from the gastrointestinal tract and which could be measured gravimetrically rather than standardized biologically. Toward the attainment of this ideal drug much chemical, pharmacologic, and clinical investigation has been devoted in recent years to the potent active principles of digitalis, primarily the purified glycosides of the drug. While no single glycoside satisfies all the criteria for the perfect preparation, the glycosides as a whole have a small yet important position in the therapy of heart disease. Because of their great usefulness in certain disturbances of cardiac

physiology, it is incumbent upon the physician to become familiar with their structure, the indications for their use, and the methods of administration.—*Broome and Orgain, North Carolina, M. J., Feb. '46.*

Maternal Overprotection—The great majority of patients normally seen in a pediatrician's office are overcared for. That is probably truer of the children seen by a pediatrician than those seen by physicians doing general practice. Both of the above statements are perhaps open to some argument, but I think no one will deny that children are now more supervised, more managed, from the cradle, and before, to maturity than ever before, and that the state of maturity is being pushed farther and farther up the chronological scale every day.

There are more and more children being spoon fed until they are grown, and I don't mean exclusively with food. More and more mothers are anxiously seeking books, lectures, and courses on "Child Care." Newspaper articles on "Your Child" or "Infant Care" are multiplying, and now, as always, these things are merely an indication of a trend. Juvenile delinquency seems to be increasing as a result rather than in spite of the desire on the part of mothers to "bring their children up" rather than to "let them grow."

"Maternal overprotection" is a new term the psychiatrists are using for a rather restricted group. They usually refer to the "leaning over backward" of the mother of an unwanted or unloved child, or that possessive attitude of a mother for a son carried to such a degree that she shuts out all outside influences: work, Boy Scouts, friends, girls, and even the boy's father.

I think it should also include the extremely large group of over-zealous mothers who think that their child is to be fed, taught, grown, slept, worked, exercised, or rested according to some very rigid set of rules. These mothers start out by thinking the child will be ruined if he takes only three and one-half ounces at a feeding when four ounces are prescribed. She reads many books, and tries to reconcile contrary opinions. She wants from the pediatrician—always—specific detailed instructions as to the number of teaspoons of this and number of ounces of that. She is the mother who sits and watches the clock, and would rather commit a mortal sin than feed the child five minutes early or late. She is afraid to talk to Mrs. Jones regarding her physician's instructions about her baby for fear she will get mixed up, and afraid not to talk for fear Mrs. Jones got some information her doctor forgot to expound to her. As her child grows older, behavior problems of her own making may arise, and she is unable to see her problem in proper perspective.

As to the causes involved, I think there are several factors. First, there is ambition. The mother wants a superbaby, not for the baby's sake, but for the reflected glory in which she will bask. Then there is the inevitable desire that her baby will have a better start, a better childhood, and will have fewer problems to face

than she had, forgetting that it was surmounting those problems that helped to build character and self reliance. The fear of failure, that the child will be found wanting, not by himself, but by his mother's friends, is another driving force. The top factor, though, I think, is the desire to manage and direct completely this child who, for the time being, is the mother's whole world.

Back of these components, of course, is a mother without enough outside interests. She indicts herself when she asks, is it true that when the child goes to school a lot of problems will vanish? This situation comes up much more often with first children or with only children, but that is only part of it. From every side mothers are being bombarded by groups interested in child care, by P. T. A.'s, by women's clubs, by churches, by schools, by government, and I am afraid by pediatricians. Very often, a mother, confused by a lot of conflicting information, appeals to pediatricians who are more impatient than sympathetic. They are usually too busy giving specific instructions about some minor ailment to attend to the broader and much more complex job of rearing a child. If they weren't too busy I wonder if pediatricians are capable of helping?

The older medical practitioner was supposed to be too much addicted to patting a mother on the back and saying, "There, there, my good woman! He'll be all right in the morning." But by that very act he allayed fear, which underlies the attitude of most mothers who magnify their child's ills and give too much importance to little problems.

The obstetrician, the pediatrician, and the general practitioner have the opportunity to lay a groundwork of confidence and a feeling of security in such mothers if they will recognize the situation and try to get the mothers to see things in proper perspective. Later on, the prescribing of nursery schools, summer camps, Boy Scouts, and so on is an admission of failure all around. The mother rarely admits that nursery school is good for her child because it takes the child away from a bad influence at home.

If one of these mothers can be made to see that it doesn't make much difference if her child takes only half an ounce of orange juice instead of one ounce, her child gets his first tooth at eight months instead of at six months as her "baby book" indicated he should, or if he takes only five ounces at a feeding when Mrs. Jones' baby the same size and age takes seven ounces—I say, if she can be made to see such things are inconsequential, she will have come quite a long way.—*Touzel, Texas State J. Med., Feb. '46.*

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CONTROL OF SYPHILIS IN PREGNANT WOMEN

"Several years ago I described a plan for controlling syphilis in pregnant women under the care of the general practitioner. This plan, part of the Illinois statewide venereal disease control program (Chicago excluded), has been carried out along the general principles then outlined up to the present time, when I am able to report on the outcome of 1,448 cases of syphilitic pregnant women under the care of 1,087 private physicians . . . Others have reported on the outcome of syphilitic pregnant women treated in public hospital clinics and maternity centers, but I have been unable to find any reports of the outcome of such cases treated by private physicians." Thus does Soloway¹ of the Illinois Department of Public Health open his discussion of this most important subject.

The author informs us that there was not a single fatality reported as a result of treatment and that there were only eight severe reactions reported, along with a greater number of minor upsets. His conclusions, in part, are that "1. The treatment of preg-

nant syphilitic women to prevent congenital syphilis is one of the most effective forms of preventive medicine. 2. The treatment recommended consists in a weekly muscular injection of a bismuth compound throughout the term of pregnancy and eight to ten intravenous injections of an arsenical with an occasional four week rest period. 3. As a result of the Illinois plan of control of syphilis in pregnant women under the care of the general practitioner there were 94.31 per cent normal living nonsyphilitic children in the 550 cases in which treatment was started before the end of the fourth month of pregnancy. 6. Pregnant women tolerate antisyphilitic treatment as well as if not better than nonpregnant women. 7. Case holding efforts necessitated public health physicians, nurses and lay investigators to make 740 investigations every year in order to have about 300 cases reported, placed and kept under antisyphilitic treatment throughout pregnancy as well as to check the child's blood after 2 months of age. 8. The Illinois Prenatal Law offers an excellent method of case finding. 9. Educational programs on all phases of cause, spread and cure of syphilis are greatly needed for the general public and midwives, and the general practitioner is in need of special education."

It is comparatively easy to institute and carry out such a program in the larger towns and cities, where distances are not great and where hospital and clinical facilities are apt to be found. But to do this in the small towns and rural areas is indeed an outstanding accomplishment and Soloway and his associates are to be congratulated upon their fine work. Apparently the decision to encourage and to rely upon the resident general practitioners was a wise one. And it seems evident that a splendid cooperation was achieved between the public health personnel and private practitioners.

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The New Orleans Graduate Medical Assembly, ninth annual meeting, will be held in New Orleans April 1-4, at the Municipal Auditorium. The program will consist of lectures by sixteen outstanding guest speakers, clinics, symposia, clinico-pathologic conferences, round-table luncheon discussions

1. Soloway, Herman M.: Control of Syphilis in Pregnant Women Under Care of the General Practitioner. J. A. M. A. 129: 500 (Oct. 13) 1945.

and technical exhibits. Registration fee of \$10.00 covers all features, including three luncheons. Physicians who plan to attend are invited to register at once with the Secretary, Room 105, 1430 Tulane Avenue, New Orleans 13, Louisiana. Information regarding hotel reservations will be sent upon receipt of request.

**POSTGRADUATE SEMINAR ON SURGERY
MEDICAL COLLEGE OF ALABAMA
MARCH 26-29**

The Medical College of Alabama announces the last in the 1946 mid-winter series of postgraduate seminars. The latest advances in the field of surgery will be the topic of discussions led by members of the Department of Surgery of the Medical College and two guest speakers.

The seminar, composed of lectures, discussions, case presentations, movies, a cadaver demonstration, round table discussion, clinico-pathologic conference, and panel discussion, will begin March 26 and continue through March 29.

Dr. Alton Ochsner and Dr. Lon Grove will be the visiting speakers. Dr. Ochsner, particularly noted for his investigative work in general and thoracic surgery, has had experience in Switzerland and Germany. He is Director of the Surgery Division, Ochsner Clinic; Head of the Department of Surgery,



DR. ALTON OCHSNER

Tulane University; and Director of the Tulane Surgical Unit, Charity Hospital. Dr. Ochsner will conduct an amphitheatre clinic and will speak on "Bronchiogenic Carcinoma."

Dr. Lon Grove is a native of Alabama. He has had experience in France and is now Associate Professor of Surgery at Emory University. Dr. Grove is especially noted for his experience in gastric and splenic surgery. "The Surgical Management of Chronic Gastric and Duodenal Ulcer" will be the topic of his discussion. He will conduct an amphitheatre clinic.



DR. LON GROVE

The Postgraduate Seminar on Surgery was preceded by a seminar on obstetrics and gynecology and one on medicine and pediatrics.

The two previous seminars were attended by doctors representing practically every county in Alabama and doctors from surrounding states. Attending veterans related war stories such as eighteen months in an internment camp and told of their experiences in the front lines of Europe. They expressed appreciation for the opportunity of becoming familiar with the latest advances in the various fields of medicine. These seminars have been considered valuable and profitable by those who have attended.

PROGRAM OF THE ANNUAL SESSION

BIRMINGHAM

APRIL 16, 17, 18, 1946

THOMAS JEFFERSON HOTEL

GENERAL INFORMATION

All general sessions of the Association will be in the Ballroom of the Thomas Jefferson Hotel, convention headquarters.

Section meetings will be held at the places indicated in the program.

The maximum time consumed by essayists must not exceed fifteen minutes. This time limit, however, does not apply to invited guests. It is suggested that the salient features of papers be presented within this time, reserving the complete elaboration for publication in the Journal. Discussions will be limited to 4 minutes for each speaker.

All papers read before the Association must be deposited with the Secretary when read; otherwise, they will not be published.

During the discussion of papers, the speaker will please walk forward to the platform and announce his name and address distinctly.

Papers will be called in the order in which they appear on the program. Should the reader be absent when called, his paper will be passed, and called again when the program is concluded.

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James A. Ferry

Harry Lee Jackson

Entertainment

Wallace Clyde, *Chairman*

Ben Carraway
J. A. Cunningham
Charles Donald
R. Curtis Green
Charles O. King
Lloyd Noland
E. C. Pope
E. C. Ray
John W. Simpson

Meeting Places, Loud Speakers, Lights

Paul Shannon, *Chairman*

Albert E. Casey
John L. Carmichael
John Jenkins
Charles Thuss
James Snow
H. B. Williams

Manikins, Demonstrations

T. M. Boulware, *Chairman*

Hunter Brown
J. H. Williams
James R. Garber

OFFICERS OF THE ASSOCIATION

President

Walter F. Scott Birmingham

Vice-Presidents

J. Paul Jones Camden
J. O. Morgan Gadsden
W. Hill McCaslan Union Springs
B. W. McNease Fayette

Secretary-Treasurer

Douglas L. Cannon Montgomery

The State Board of Censors

F. V. Caldwell, *Chairman* Huntsville
M. S. Davie Dothan
K. A. Mayer Lower Peach Tree
M. Y. Dabney Birmingham
T. B. Hubbard Montgomery
W. D. Partlow Tuscaloosa
French Craddock Sylacauga
C. A. Thigpen Montgomery
Lloyd Noland Fairfield
J. D. Perdue Mobile

State Health Officer

E. F. Austin Montgomery

* * *

PROGRAM

First Day, Tuesday, April 16

Morning Session

The Ballroom
Thomas Jefferson Hotel

1. Call to Order at 10:00 A. M. by the President—
Walter F. Scott, Birmingham.
2. Invocation—
Rev. Francis J. Foley, St. Paul's Catholic Church, Birmingham.
3. Addresses of Welcome—
Hon. Clarence M. Pinson, President, Jefferson County Board of Commissioners.
Joseph M. Donald, President, Jefferson County Medical Society.
4. Presentation of the President—
J. Paul Jones, Senior Vice-President, Camden.
5. Message of the President—
Walter F. Scott, Birmingham.
6. Reports of the Vice-Presidents—
(1) J. Paul Jones, Camden.
(2) J. O. Morgan, Gadsden.
(3) W. Hill McCaslan, Union Springs.
(4) B. W. McNease, Fayette.
7. Report of the Secretary-Treasurer—
Douglas L. Cannon, Montgomery.
8. Report of the Committee of Publication—
Douglas L. Cannon, Montgomery.

9. Reports of Standing Committees—

- (1) Public Relations—
B. F. Austin, *Chairman*.
- (2) Mental Hygiene—
Frank A. Kay, *Chairman*.
- (3) Maternal and Infant Welfare—
A. E. Thomas, *Chairman*.
- (4) Cancer Control—
J. P. Chapman, *Chairman*.
- (5) Prevention of Blindness and Deafness—
B. B. Warwick, *Chairman*.
- (6) Postgraduate Study—
Ralph McBurney, *Chairman*.
- (7) Accidents and Industrial Hygiene—
C. H. Ford, *Chairman*.
- (8) Archives and History—
M. Y. Dabney, *Chairman*.
- (9) Physician-Druggist Relationships—
R. E. Cloud, *Chairman*.
- (10) Postwar Planning Commission—
M. S. Davie, *Chairman*.
- (11) Sparks-Partlow Portrait Fund—
H. B. Searcy, *Chairman*.

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Afternoon Session

Tuesday, April 16

2:00 P. M.

SECTION ON SURGERY

The Ballroom
Thomas Jefferson Hotel

James M. Mason, Sr., Birmingham, *Chairman*
Charles J. Donald, Birmingham, *Secretary*

1. Paper: *Volvulus of the Small Intestine*.
FRENCH CRADDOCK, SR., and FRENCH CRADDOCK, JR.
Sylacauga.
Discussion: P. P. Salter, Eufaula.
2. Paper: *Fascial Spaces and Compartments*.
CHARLES M. GOSS, Prof. of Anatomy,
Medical College of Alabama, Birmingham.
Discussion: H. E. Gray, Anniston.
3. Paper: *Closure of Abdominal Incisions*.
T. BRANNON HUBBARD,
Montgomery.
Discussion: E. V. Caldwell, Huntsville.
4. Paper: *Sarcoma of the Gastrointestinal Tract*.
J. O. MORGAN,
Gadsden.
Discussion: K. F. Kesmodel, Birmingham.
5. Paper: *Some Common Urologic Complications Following Abdominal Surgery*.
J. HENRY GOODE,
Tuscaloosa.
Discussion: J. U. Reaves, Mobile.

Afternoon Session

Tuesday, April 16

SECTION ON PEDIATRICS

2:00 P. M.

Room 312

Thomas Jefferson Hotel

J. C. Chapman, Birmingham, *Chairman*W. A. Clyde, Birmingham, *Secretary*

1. Paper: *Recent Advances in the Management of Rheumatic Heart Disease in Children.*
J. H. BAUMHAUER, Mobile.
Discussion: W. R. Britton, Montgomery.
2. Paper: *Pediatric Problems in General Practice.*
W. A. DANIEL, JR., Montgomery.
Discussion: J. Mac Bell, Mobile.
3. Paper: *Epidemiology of Streptococcus Infections.*
BEACH CHENOWETH, Birmingham.
Discussion: A. C. Gipson, Gadsden.
4. Paper: *Treatment of Pertussis.*
C. K. PITT, Decatur.
Discussion: Hughes Kennedy, Birmingham.
5. Paper: *Management and Re-Education of the Spastic Child.*
JOHN SIMPSON and W. S. LITTLEJOHN, Birmingham.
Discussion: A. A. Walker, Birmingham.

The Norwood Clinic will entertain the Association at a barbecue from 5 to 7 P. M., at Dr. C. N. Carraway's farm, Chalkville, Alabama. Transportation will be furnished.

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Evening Session

Tuesday, April 16

8:00 P. M.

SECTION ON MEDICINE

The Ballroom

Thomas Jefferson Hotel

James S. McLester, *Chairman*Ivan Berrey, *Secretary*

SYMPOSIUM ON WAR MEDICINE

1. *Malaria:*
 - (a) *In the Pacific.*
EDGAR G. GIVHAN, Birmingham.
 - (b) *In the Mediterranean Theatre.*
JAMES B. McLESTER, Birmingham.
2. *Rheumatoid Diseases.*
J. O. FINNEY, Gadsden.
3. *Amebiasis in the India-Burma Theatre.*
J. M. BARNES, Montgomery.
4. *The War Psychoses.*
W. S. LITTLEJOHN, Birmingham.

Evening Session

Tuesday, April 16

SECTION ON EYE, EAR, NOSE AND THROAT

Colonial Room

Tutwiler Hotel

E. W. Rucker, Jr., *Chairman*L. T. Kincannon, *Secretary*

5:00 to 6:30 P. M.

Cocktail Party

8:00 P. M.

1. Paper: *A Critical Analysis of the Fenestration Operation.*
J. BROWN FARRIOR, Ochsner Clinic, New Orleans.
Discussion: C. A. Thigpen, Montgomery.
2. Paper: *Plastic Surgery of the Lids—With Color Slides.*
CAPT. ALSTON CALLAHAN, U. S. A. M. C., Northington General Hospital, Tuscaloosa.
Discussion: F. H. Clements, Birmingham.
2. Paper: *Cutaneous Eruptions Frequently Seen in E. E. N. and T. Practice.*
MAJ. FRED T. BECKER, U. S. A. M. C., Kennedy General Hospital, Memphis, Tennessee.
Discussion: H. R. Farmer, Fairfield.

* * *

Morning Session

Wednesday, April 17

8:30 A. M.

GENERAL

The Ballroom

Thomas Jefferson Hotel

President Scott, Presiding

1. Paper: *Surgery of the Colon—Traumatic and Elective.*
JAMES M. MASON, III, Birmingham.
2. Paper: *Injuries to the Hip.*
LAWSON THORNTON, Atlanta, Georgia.
3. Paper: *Military Plastic Surgery — Lantern Slides.*
COL. JAMES BARRETT BROWN, U. S. A. M. C., Valley Forge General Hospital, Phoenixville, New Orleans.
4. Paper: *Chronic Shock — Its Diagnosis and Treatment.*
CHAMP LYONS, Ochsner Clinic, New Orleans.
5. The Jerome Cochran Lecture
The Significance of Incidental Observations in the Progress of Medicine.
ALTON OCHSNER, Tulane University School of Medicine, New Orleans.
6. Announcement of vacancies in the College of Counsellors.

12 Noon

Auditorium of Hillman Hospital

Presenting to the Medical College of Alabama Portraits of the Honorable Chauncey Sparks, Governor of Alabama, and William D. Partlow, M. D., Chairman of the Association's "Four-Year Medical School" Committee, in Appreciation of Their Outstanding Work Toward Procuring the Medical College of Alabama.

Harvey B. Searcy, Presiding

1. Presentation of the Portrait of Governor Sparks by W. M. Salter, Anniston.
(Artist: Mr. Milner Benedict, Atlanta.)
2. Presentation of the Portrait of William D. Partlow by Seale Harris, Birmingham.
(Artist: Mr. John Clay Parker, New Orleans.)
3. Acceptance—
DR. RAYMOND R. PATY,
President of the University of Alabama.
DR. ROY R. KRACKE,
Dean of the Medical College of Alabama.

(Funds for the portraits were obtained by voluntary contributions from physicians and friends in Alabama.)

COMMITTEE ON PORTRAITS

H. B. Searcy, *Chairman*

W. M. Salter	Fred W. Wilkerson
J. D. Perdue	Seale Harris
Douglas L. Cannon,	<i>Treasurer</i>

Afternoon Session

Wednesday, April 17

2:00 P. M.

GENERAL

The Ballroom
Thomas Jefferson Hotel

1. Paper: *Clinical Importance of Congenital Anomalies of the Urinary Tract.*
EDGAR BURNS, Ochsner Clinic,
New Orleans.
Discussion: J. W. Davis, Jr., Montgomery.
2. Paper: *Case Report of Diabetes Mellitus and Hyperinsulinism of Pituitary Origin.*
SEALE HARRIS and LEON S. SMELO,
Birmingham.
Discussion: Willena Peck, Montevallo.
2. Paper: *Early Diagnosis of Brain Tumor.*
WALTER HAYNES,
Birmingham.
Discussion: Garber Galbraith, Birmingham.

4. Paper: *Role of the Medical College in Alabama Medicine.*
ROY R. KRACKE,
Dean of the Medical College of Alabama,
Birmingham.

5. Paper: *Prevention of Deafness.*
GILBERT FISHER,
Birmingham.
Discussion: Harvey Searcy, Tuscaloosa.

Dr. James S. McLester and Dr. James B. McLester invite the members of the Association and visiting physicians to their office at 930 South Twentieth Street for cocktails from five to six Wednesday afternoon, April 17th.

The annual meeting and banquet of the Alumni Association of the Medical Department of the University of Alabama will be held at the Tutwiler Hotel at 6:00 P. M. Ladies are invited, also physicians who are not alumni. The principal speaker will be Dr. Roy R. Kracke, Dean of the Medical College of Alabama. There will be a floor show.

Dr. James A. Meadows is President of the Association, and Dr. Frank H. Clements, Chairman of the Committee on Arrangements.

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Evening Session

Wednesday, April 17

8:00 P. M.

The Ballroom
Thomas Jefferson Hotel

POSTWAR PLANNING

M. S. Davie, Dothan, Presiding

1. Paper: Subject to be announced.
EDWIN F. STEGEN,
National Physicians Committee for the Extension of Medical Service.
Chicago, Illinois.
2. Alabama Postwar Planning.

President's Reception and Dance

The President's Reception and Dance will be held at the Birmingham Country Club at 10:00 P. M.

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Last Day, Thursday, April 18

8:30 A. M.

The Ballroom
Thomas Jefferson Hotel

Business meeting of the Association sitting as the Board of Health of the State of Alabama.

- (1) Report of the Board of Censors;
- (2) Revision of the Rolls;
- (3) Election and Installation of Officers.

Adjournment

ENTERTAINMENT FEATURES

(Summarized)

Tuesday, April 16, 4:30 to 6:00 P. M., a tea for the Woman's Auxiliary at the home of Dr. and Mrs. Clyde W. Deaver, 2845 Bush Boulevard.

Tuesday, April 16, 5 to 7 P. M., barbecue at the farm of Dr. C. N. Carraway, Chalkville, Ala.

Wednesday, April 17, at 12:30 P. M., luncheon meeting of the Woman's Auxiliary at the Tutwiler.

Wednesday, April 17, Dr. James S. and Dr. James B. McLester will entertain the members of the Association and visiting physicians from 5 to 6 P. M., at their office at 930 South Twentieth Street.

Wednesday, April 17, President's Reception and Dance, Birmingham Country Club, 10 P. M.

* * *

OTHER MEETINGS**Annual Banquet Meeting****Alumni Association****Medical Department****University of Alabama**

The annual meeting and banquet of the Alumni Association of the Medical Department of the University of Alabama will be held at the Tutwiler Hotel at 6:00 P. M., April 17. Ladies are invited, also physicians who are not alumni. The principal speaker will be Dr. Roy R. Kracke, Dean of the Medical College of Alabama.

There will be a Floor Show.

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PROGRAM**TWENTY-FIRST ANNUAL MEETING****OF THE****WOMAN'S AUXILIARY****TO****THE MEDICAL ASSOCIATION****OF THE****STATE OF ALABAMA**

THE TUTWILER HOTEL, BIRMINGHAM

APRIL 16-17-18

President

Mrs. John Mac Bell Mobile

President-Elect

Mrs. Lelias E. Kirby Birmingham

Vice-Presidents

Mrs. B. F. Caffey	Choccolocco
Mrs. Tom Guyton	Decatur
Mrs. Frank Jordan	Huntsville
Mrs. David H. Sparks	Birmingham

Recording and Corresponding Secretary

Mrs. V. H. Hill	Mobile
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Treasurer

Mrs. J. R. Chandler	Bessemer
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Auditor

Mrs. James Williams	Jacksonville
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Historian

Mrs. T. E. Dilworth	Huntsville
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Finance Officer

Mrs. George Williamson	Bessemer
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Program

Mrs. W. J. Rosser	Birmingham
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Advisory Committee

Dr. E. V. Caldwell, <i>Chairman</i>	Huntsville
Dr. Walter Scott	Birmingham
Dr. J. O. Lisenby	Atmore
Dr. Roy R. Kracke	Birmingham
Dr. Douglas L. Cannon	Montgomery

Tuesday, April 16

3:30 P. M.

Annual Executive Board Meeting

Mrs. John Mac Bell, Presiding

Wednesday, April 17

9:00 A. M.

CONVENTION PROGRAM

Call to Order—Mrs. John Mac Bell, President, Mobile.

Invocation—Rev. John L. Horton, First Methodist Church, Birmingham.

Welcome Address—Mrs. M. Y. Dabney, Birmingham.

Response—Mrs. A. M. Cowden, Mobile.

Memorial Service—Mrs. C. M. Cleveland, Mobile.

Song—Goin' Home, by Anton Dvorak (adapted to Largo of the Symphony, "From the New World") by Mrs. Margaret Boston Ferguson, Birmingham.

Address—Dr. Roy R. Kracke, Dean, Medical College of Alabama, Birmingham.

Message—Hygeia—Dr. J. O. Morgan, Gadsden.

Message—The Field Army—Mrs. Ray Meade, Birmingham.

Reading of Minutes.

Report of Entertainment Chairman.

Annual Reports of Officers:

First Vice President—Mrs. B. F. Caffey, Choccolocco.

Second Vice-President—Mrs. Tom Guyton, Decatur.

Third Vice-President—Mrs. Frank Jordan, Huntsville.

Fourth Vice-President—Mrs. David H. Sparks, Birmingham.

Recording and Corresponding Secretary—Mrs. V. H. Hill, Mobile.

Treasurer—Mrs. J. R. Chandler, Bessemer.

Historian—Mrs. T. E. Dilworth, Huntsville.

Auditor—Mrs. James Williams, Jacksonville.

Finance Officer—Mrs. George Williamson, Bessemer.

President—Mrs. John Mac Bell, Mobile.

Annual Reports of Standing Committees:

Press and Publicity—Mrs. Carl Harris, Bessemer.

Public Relations—Mrs. A. M. Roan, Decatur.

Archives—Mrs. R. E. Tyler, Birmingham.

Program—Mrs. W. J. Rosser, Birmingham.

Hygeia—Mrs. M. Vaun Adams, Mobile.

Lettie Daffin Perdue Scholarship Fund—Mrs. E. S. Sledge, Mobile.

Memorial—Mrs. C. M. Cleveland, Mobile.

Research and Romance of Medicine—Mrs. W. M. McKissack, Huntsville.

Jane Todd Crawford Memorial Scholarship Fund—Mrs. Charles L. Rutherford, Mobile.

Legislative—Mrs. J. U. Reaves, Mobile.

Exhibits—Mrs. Euclid Isbell, Gadsden.

Parliamentary Referee—Mrs. L. W. Roe, Mobile.

Annual Reports of County Presidents:

1. Etowah—Mrs. Ragan Lonnergan, Gadsden.

2. Calhoun—Mrs. B. F. Caffey, Choccolocco.

3. Mobile—Mrs. Clarence Partridge, Mobile.

4. Jefferson—Mrs. C. W. Deaver, Birmingham.
Mrs. C. A. Harris, Bessemer.

5. Morgan—Mrs. Erskine Chenault, Decatur.

6. Madison—Mrs. E. V. Caldwell, Huntsville.

Message—Mrs. W. W. Potter, President, Woman's Auxiliary, Southern Medical Association, Concord, Tenn.

Report of Courtesy Committee—Mrs. J. M. Donald, Birmingham.

Report of Credentials Committee—Mrs. George Denison, Birmingham.

Unfinished Business.

New Business.

Report of Nominating Committee—Mrs. E. V. Caldwell, Huntsville.

Election of Officers.

Installation of Officers—Mr. J. R. Horn, Bessemer.

Announcements by New President.

Reading of Minutes.

Adjournment.

Tea

Honoring Mrs. W. W. Potter, President, Woman's Auxiliary, Southern Medical Association, and present State and local presidents at the home of Dr. and Mrs. C. W. Deaver, 2845 Bush Boulevard, 4:30 to 6:00 P.M.—Mrs. Gilbert F. Douglas, Chairman of Arrangements, and Mrs. R. Curtis Green, Co-Chairman.

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Wednesday, April 17

12:30 P. M.

Luncheon Meeting
Tutwiler Hotel

Mrs. Clyde W. Deaver, Birmingham, Presiding

Invocation—Dr. Edward V. Ramage, First Presbyterian Church, Birmingham.

Welcome Address—Mrs. Walter Scott, Birmingham.

Response—Mrs. N. T. Davie, Anniston.

Violin Solo—Mrs. McClellan Ratchford—Accompanist, Mrs. Ray A. Henderson.

Address—Socialized Medicine, Mrs. J. U. Reaves, Mobile.

Introduction of Guests and Officers.

Address—Mrs. W. W. Potter, President, Woman's Auxiliary, Southern Medical Association, Concord, Tenn.

Announcements.

(Note: Reservations for the luncheon should be made with Mrs. L. P. Botta, 1409 Forty-Fourth Street, Birmingham. The affair is a courtesy of the Jefferson County Medical Society—Mrs. Lelias E. Kirby, Chairman of Arrangements, and Mrs. C. F. Lewis, Co-Chairman.)

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Thursday, April 18

10:00 A. M.

Executive Board Meeting

New President Presiding

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

B. F. Austin, M. D.
State Health Officer

INFLUENZA

An unusually large number of Alabamians have been suffering from influenza during the past few weeks, and the State Health Officer and other public health authorities have been forced to the conclusion that the disease has reached epidemic proportions. Fortunately, there have been relatively few deaths from it thus far, and indications are that the great majority of cases have been of the mild type. So there is no occasion for alarm. However, there is need for everyone to exercise reasonable care and to avoid exposure insofar as possible.

Influenza-conscious men and women of middle age, who remember, with something of a shudder, the terrifying outbreak of 1918 and 1919 find themselves wondering whether the end of World War II is to have as tragic and heart-breaking an aftermath as the end of World War I. They remember that their friends and perhaps members of their own families, who appeared perfectly well at the beginning of the week, were stricken at mid-week and were buried at the week's end. They recall the heavy casualty list from the civilian front which continued and indeed lengthened after the military casualty lists slowed up and stopped. If they did not already know it, they have since been reminded that, whereas approximately 1,270 Alabamians died in battle and as a result of wounds and illness contracted while in the service of their country during the approximately 19 months of that earlier conflict, 5,446 other Alabamians—more than four times as many as died in the war—succumbed to pneumonia, for which that influenza outbreak was largely responsible. Thus, as one commentator expressed it a few years ago, "these two diseases were responsible during a single year for approximately ten times as many deaths in Alabama as occurred among all the Alabamians engaged in 19 months of the most deadly form of warfare known". Those whose memory pictures extend back nearly three decades are hardly

inclined to argue with Frederick Lewis Allen's characterization of the 1918 epidemic as "the worst pestilence of modern times."

He who assays the task of prophesy treads on dangerous ground, and that is especially true of him who ventures to prophesy the course of disease outbreaks and their aftermaths. However, it seems safe to predict that the present widely scattered outbreak, of which the Alabama epidemic is only a part, will not approach its 1918 counterpart either in the number of its victims or in its killing power. Fortunately, medical science has made great progress within the past three decades, and much of the mystery that surrounded influenza, its cause, its mode of transmission and its control, is a mystery no longer. Needless to say, that progress is being placed at the disposal of the physicians and other health workers struggling with the present outbreak.

Medical scientists and practicing physicians treating influenza among their own patients have shown considerable interest in various influenza vaccines which have been developed within recent years. One of these has been used with considerable success in the protection of Army personnel against the disease and was to have been made available to civilians about the first of December. It is believed to be effective against Types A and B, which are said to have been responsible for most of the influenza epidemics of recent years. As a Science Service writer declared in a recent newspaper dispatch: "Army studies, prior to the general vaccination order, showed that about 75 per cent of the vaccinated were protected against influenza during outbreaks that occurred soon after the vaccination."

Considerable attention was given last summer in the press to a new influenza vaccine which had been developed under the auspices of the Committee on Medical Research of the Office of Scientific Research and Development. It was described in an article in the *Journal of Experimental Medicine* of the Rockefeller Institute, the author being Dr. Wendell M. Stanley, of the Rockefeller Institute staff. This vaccine is believed to

offer some definite improvements over others, including greater regularity in its effectiveness and greater ease of manufacture, making for larger production and lowered cost.

As encouraging as has been the progress made in recent years in the conquest of influenza by the vaccine method, however, it should be remembered that the protection afforded by vaccination is at best uncertain. It should also be remembered that even the uncertain protection thus received lasts only a short time, seldom longer than four or five weeks. So apparently it will be some time yet before one will be justified in taking an immunizing dose of influenza vaccine and then exposing oneself to the disease with the thoughtless abandon with which one now associates with typhoid fever or diphtheria victims after being immunized against these forms of illness.

It is the part of wisdom therefore to continue to take the same precautions against influenza that wise persons took before laboratory workers opened the new mode of attack upon the disease. A knowledge of influenza and its manner of spread is, or should be, most helpful in protecting oneself against it.

One of the most important discoveries regarding it is that it is caused by filterable viruses of different strains. These viruses are active agents much smaller than the germs of typhoid and most other diseases and in fact are too small to be seen through any microscope. Like the viruses responsible for the common cold, they are present in large numbers in the discharges from the nose and throat of a person suffering from the disease. When such a person coughs or sneezes, they are sprayed into the air in the form of small droplets, which may be inhaled by anyone who happens to be near the cougher or sneezer. Those dangerous droplets may also be deposited on solid food, silverware or other articles which the victim puts into his mouth, coughs upon or handles after coughing into his hand. They then are carried into the body of someone else who eats food infected in this way or places other infected articles into his mouth. Although theoretically influenza viruses may also be transmitted by liquids like milk or drinking water, it is pretty well agreed by medical men that liquids play no material

part, if any part at all, in the prevalence of influenza. They are also in general agreement that the vast majority of cases are transmitted by close physical contact with coughing and sneezing victims.

It usually requires at least 24 hours for symptoms to appear after a person has been exposed to influenza virus, and in some instances the next victim is symptom-free for as long as 72 hours after exposure. In addition to the uncontrollable impulse to sneeze, sore throat, the all but constant discharge of mucus from the nose and the other symptoms of both influenza and a bad cold, there are others more or less peculiar to this form of illness. Elevation of temperature, which may or not be present with a cold, is almost always present when one has influenza. There are severe pains in many parts of the body, especially the back, head and limbs, and often these are accompanied by soreness. The victim is also conscious of a feeling of extreme fatigue, usually much more pronounced than that accompanying other diseases of such brief duration. Like the cough which is also one of the most marked symptoms of influenza, that feeling of fatigue often persists for some time after the disease has run its normal course.

Many people think that a case of influenza is a result of a neglected or improperly treated cold. This, however, is not true. Nor is influenza an extreme form of cold. Different viruses are responsible for the two diseases, and the diseases themselves are distinct entities. This may be hard for many people to believe, in view of the fact that medical men and public health workers are constantly warning their patients and the public against neglecting colds, lest they pay for their neglect by having influenza. The explanation of this apparent inconsistency is this: While cold viruses do not cause influenza, a bad cold tends to lower the body's resistance and make it much more susceptible to infection with the influenza virus when exposure takes place.

While influenza, even under non-epidemic conditions, is sufficiently dangerous to human life to justify its being listed as a fatal disease, its greatest danger does not lie in its own death-dealing potentialities but in the shadowy border-line between influenza and the deadly pneumonia. Indeed it is so

very difficult to say when one form of illness ends and the other begins that some vital statistics reports make little attempt to separate them in their tabulations of the causes of death but, instead, combine them under the general heading of "deaths from influenza-pneumonia." Even the most carefully kept vital statistics reports give very little idea as to how many of the 1,445 deaths attributed to pneumonia in this State in 1944 would not have occurred if the victims had not previously contracted influenza.

Influenza, like a cold, is much more infectious in the early, or beginning, stage than it is after it has developed sufficiently to cause the victim to take to his bed and call his physician. It is unfortunate that this is true, because it means that untold thousands of Alabamians and millions of others are exposed to the disease when they do not realize that their friends, relatives and fellow-workers have it and have in fact become virtual incubators of the influenza viruses. By the time the victims realize they have influenza and begin to take precautions to protect others, the disease has become much less communicable.

As soon as a person begins to show symptoms of influenza, he or she should go to bed and call a physician. He will advise the measures that should be taken to shorten the period of illness and make recovery most certain.

To prevent having influenza, one should obtain as much exercise as possible out in the open air, if the weather is favorable. It is advisable to avoid crowds, as that is the best way to avoid exposure. One's place of work should be kept well ventilated and well heated—but not too hot—at all times, and the same is true of one's sleeping quarters. At both places care should be exercised to avoid drafts. One should avoid overheating by eating moderately. It is well to drink more water than usual during a time of unusual influenza incidence, and the intake of fruit juices should be increased. One needs to get plenty of rest, and that includes, with emphasis, plenty of sleep. One's clothing habits should be adjusted to the state of the weather, with enough heavy clothing while out of doors to keep one comfortably warm but not enough while indoors to overheat the body. Overshoes should be worn in rainy weather or other measures should

be taken to avoid getting the feet wet on the way to work and letting them stay wet throughout the day. Whenever shoes or stockings become wet, they should be removed and dried and the feet and legs should also be wiped dry with a towel, if possible.

Influenza, like every other epidemic disease, is a problem for society as a whole and also a problem for the individual. Society, represented by the public health agencies, is doing its best to protect you against its dangers. You owe it to yourself and to others to do whatever you can to help in the effort.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

DECEMBER 1945

Examination for diphtheria bacilli and Vincent's	498
Agglutination tests (typhoid, Brill's, undulant fever)	396
Typhoid cultures (blood, feces and urine)	430
Examinations for malaria	318
Examinations for intestinal parasites	963
Serologic tests for syphilis (blood and spinal fluid)	34,994
Darkfield examinations	22
Examinations for gonococci	2,247
Examination for tubercle bacilli	1,597
Examinations for Negri bodies (microscopic)	104
Water examinations	918
Milk examinations	1,493
Miscellaneous	353
Total	44,333

FOR THE YEAR 1945

Examinations for diphtheria bacilli and Vincent's	7,686
Agglutination tests (typhoid, Brill's, undulant fever)	9,255
Typhoid cultures (blood, feces and urine)	10,150
Examinations for malaria	9,578
Examinations for intestinal parasites	20,607
Serologic tests for syphilis (blood and spinal fluid)	401,507
Darkfield examinations	450
Examinations for gonococci	38,925
Examinations for meningococci	39
Examinations for tubercle bacilli	18,402
Examinations for Negri bodies (microscopic)	1,388
Water examinations	14,303
Milk examinations	23,515
Miscellaneous	8,056
Total	563,861

BUREAU OF PREVENTABLE DISEASES

D. G. Gill, M. D., Director

CURRENT MORBIDITY STATISTICS

1945

	Nov.	Dec.	E. E.* Dec.
Typhoid	13	7	4
Typhus	42	50	41
Malaria	87	117	167
Smallpox	0	2	0
Measles	8	13	66
Scarlet fever	121	119	114
Whooping cough	91	81	92
Diphtheria	116	69	93
Influenza	481	3778	532
Mumps	37	69	49
Polio-myelitis	6	8	4
Encephalitis	0	1	1
Chickenpox	70	86	134
Tetanus	2	2	3
Tuberculosis	151	253	218
Pellagra	3	3	10
Meningitis	9	19	6
Pneumonia	191	465	376
Syphilis	811	1086	1347
Chancroid	13	12	12
Gonorrhea	880	965	408
Ophthalmia	0	0	0
Trachoma	0	0	0
Tularemia	4	1	1
Undulant fever	1	6	4
Dengue	0	0	0
Amebic dysentery	4	4	0
Cancer	176	224	0
Rabies—Human cases	0	0	0
Positive animal heads	3	62	

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

Tridione, a new drug whose effect on epilepsy is still being investigated, has brought spectacular results in some cases of psychomotor seizures, a condition in which mental disturbance is the principal feature of the attacks.

Writing in the March 2 issue of The Journal of the American Medical Association, Russell N. DeJong, M. D., from the Department of Neurology, University of Michigan Medical School and University Hospital, Ann Arbor, Mich., says that thus far tridione has not proved to be sufficiently effective when used alone, partly owing to the fact that most of the patients in his study were also subject to other types of epilepsy. These had been treated by anticonvulsant drugs such as phenobarbital and the bromides but in no instance were psychomotor attacks controlled by these drugs. The drugs were continued with the tridione, Dr. DeJong says.

Psychomotor seizures are characterized by loss of memory during which the patient may act like one intoxicated. The attacks may last only a few minutes or they may go on for hours or days. While in this state the patient is morose and irritable and may become ugly or violent if forcibly restrained. Patients are often incapacitated by the attacks, and, as the result of the nature of the seizures, may require custodial or institutional care.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, Director

PROVISIONAL MORTALITY STATISTICS

REPORTED BIRTHS, STILLBIRTHS, DEATHS FROM CERTAIN IMPORTANT CAUSES AND RATES*

ALABAMA, NOVEMBER 1945, 1944, 1943

Births, Stillbirths, and Causes of Death	Number of Deaths Registered— Nov. 1945			Rate (Annual Basis)		
	White	Colored	Total	1945	1944	1943
Births (exclusive of stillbirths)	**	**	5260	22.1	26.5	26.1
Stillbirths	**	**	156	28.8	29.6	27.7
Deaths (exclusive of stillbirths)	1117	818	1935	8.1	3.8	9.1
Infant deaths:						
Under one year	133	115	248	47.1	41.6	41.6
Under one month	99	69	168	31.9	25.4	25.1
Typhoid and paratyphoid 1, 2	1	1	2	0.8		0.4
Epidemic cerebrospinal meningitis 6	3	1	4	1.7	2.1	1.7
Scarlet fever 8		1	1	0.4	2.1	3.4
Whooping cough 9		2	2	2.9	6.3	2.5
Diphtheria 10	5	2	7			
Tuberculosis, all forms 13-22	50	43	93	39.1	43.8	47.9
Malaria 28		1	1	0.4	0.8	0.8
Syphilis 30	5	20	25	10.5	11.0	15.1
Influenza 33	13	20	33	13.9	8.8	14.7
Measles 35						
Polio-myelitis 36						
Encephalitis 37					0.4	0.4
Typhus fever 39	3		3	1.3	1.7	1.3
Cancer, all forms						
45-55	107	63	170	71.5	74.2	63.9
Diabetes mellitus 61	24	12	36	15.1	10.1	12.2
Pellagra 69	5	3	8	3.4	3.0	8.0
Alcoholism 77	1	1	2	0.8	0.8	0.4
Intracranial lesions 83	85	80	165	69.4	86.0	72.7
Diseases of the heart						
90-95	273	111	384	161.4	164.4	193.8
Diseases of the arteries 96-99	16	3	19	8.0	11.4	13.9
Bronchitis 106	3	4	7	2.9	2.1	2.1
Pneumonia, all forms						
107-109	38	65	103	43.3	51.4	45.4
Diarrhea and enteritis (under 2) 119	7	6	13	5.5	8.0	8.8
Diarrhea and enteritis (2 and over) 120	4	3	7	2.9	0.4	0.8
Appendicitis 121	2	4	6	2.5	6.3	5.5
Hernia, intestinal obstruction 122	8	11	19	8.0	5.5	7.6
Cirrhosis of the liver 124	8	4	12	5.0	2.1	2.9
Nephritis, all forms 130-132	90	68	158	66.4	70.0	82.4
Diseases of the puerperal state 140-150	7	8	15	27.7	30.8	42.3
Puerperal septicemia 140, 142a, 147	4		4	7.4	9.2	15.7
Suicide 163-164	13	4	17	7.1	4.2	5.9
Homicide 165-168	10	14	24	10.1	15.6	11.4
Accidental deaths (exclusive of motor vehicle) 169, 171-195, 201-205, 212-227	60	25	85	35.7	48.9	45.8
Motor vehicle 206-211	45	18	63	26.5	15.6	19.3
All other known causes	192	109	301	126.5	139.1	137.5
Ill-defined and unknown causes 199-200	39	113	152	63.9	78.4	68.9

*Not available.

**Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific causes per 100,000 population; from puerperal causes per 10,000 total births.

BOOK ABSTRACTS AND REVIEWS

Everyday Psychiatry. By John D. Campbell, M. D., Commander, M. C., U. S. N. R., Chief Neuropsychiatrist, U. S. Naval Base Hospital No. 8; formerly Chief Neuropsychiatrist, U. S. Naval Hospital, Charleston, S. C., and Visiting Lecturer in Psychiatry, Medical College of South Carolina. Cloth. Price, \$6.00. Pp. 333. Philadelphia: J. B. Lippincott Company, 1945.

This book represents an effort to present clearly and simply the borderline mental conditions that confront the practicing physician.

It is written by a practical, plain spoken psychiatrist, who himself has been general practitioner, state hospital physician, and psychiatrist in both civil and military practice.

The graver, more pronounced psychoses are not included in his discussions. He deals mainly with the psychoneurotic, the psychopathic personality, the mild depressives and with minor personality deviations.

In some instances he seems too dogmatic, especially in his discussion on conscience which he defines as "a basic, constitutionally determined personality trait."

His language is forceful, his descriptive style is pleasing, his approach is practical, and his therapy simplified.

The book's readability makes it a nice addition to any physician's library.

Frank A. Kay, M. D.

Men Without Guns. Text by DeWitt Mackenzie, War Analyst of The Associated Press. Descriptive captions by Major Clarence Worden, Medical Department, U. S. Army. With foreword by Major General Norman T. Kirk, Surgeon General, U. S. Army. Cloth. Price, \$5.00. Pp. 152, with 177 drawings, including 118 plates in full color by famous contemporary artists. Philadelphia: The Blakiston Company, 1945.

This reviewer can add nothing to the publisher's description of the volume since he found it just as appealing as it was represented to be. It is recommended to those interested in action and art. This is what the publisher had to say about it:

"This book records the great work of the Army Medical Corps in the war. It is an authentic story of the men who fought without guns to save human life, the story of the services of our doctors, nurses, and enlisted men on the battlefields and in the hospitals of Europe and Asia. DeWitt Mackenzie, of The Associated Press, whose graphic recital of the story behind the pictures in the book will hold the reader's attention from beginning to end, was a war correspondent in World War I and, as Associated Press War Analyst during World War II, covered the African, European, Burma, China and Pacific fronts, where he saw the Army Medical Corps in action. A dozen American artists braved the hardships and perils of war to make the notable series of historical paintings reproduced from the Abbott Collection of Paintings, now the property of the U. S. Government. The book con-

stitutes an authentic and valuable contemporary history of Army Medicine in the war and a priceless archival treasure."

Douglas L. Cannon

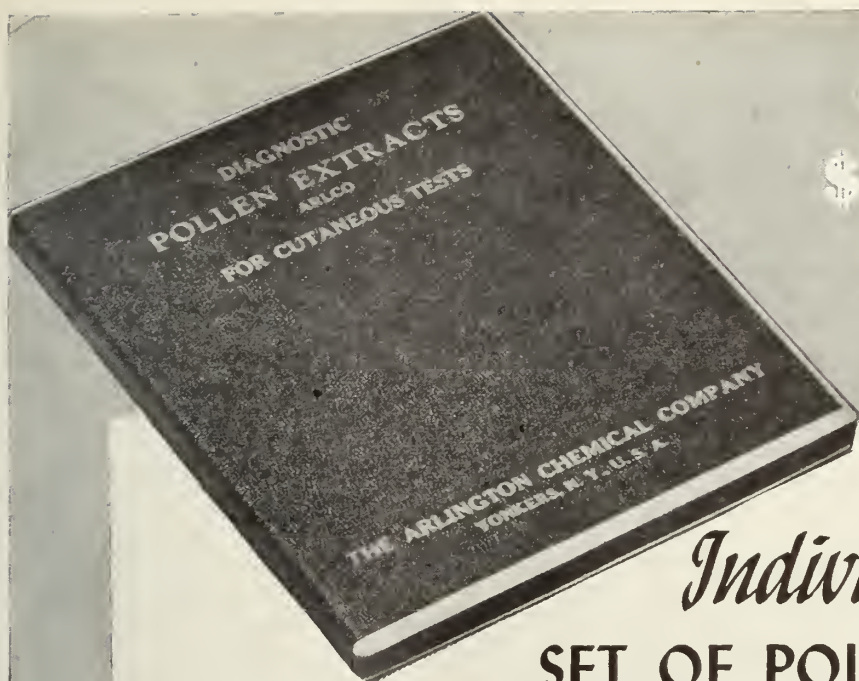
In an editorial entitled "The Battle Against Cancer" Editor Morris Fishbein, M. D., says in the current issue of *Hygeia*, health magazine of the American Medical Association, that "among the most conspicuous problems in the control of cancer is the difficulty of getting the patient to seek medical care soon enough to permit medicine to do for him all that can be done."

Continuing, the editorial says:

"In many instances patients frequently delay because of ignorance or fear in seeking medical care. In some instances, of course, doctors fail to carry out enough scientific study to detect the presence of cancer that is not easily detectable. This means that more and more education is needed in regard to the importance of early recognition and treatment of cancer. If people would only try to call attention to suggestive symptoms as soon as they are noticed and if there were available everywhere opportunities for immediate consultation with physicians who had access to the necessary aids for diagnosis, the number of needless deaths from cancer would be greatly decreased.

"In Great Britain, under the British Cancer Act of 1939, the country is divided into regions in which there are available diagnostic units, treatment centers and facilities for the care of advanced cases. A similar program is now in process of development for the United States with the aid of funds to be provided by the American Cancer Society. Both the American Medical Association and the American College of Surgeons are cooperating in the development of principles and practices which would make this plan effective.

"Regardless, however, of the facilities and the medical advice that are available, these can do little to reduce the total number of unnecessary deaths unless people learn to overcome their fears and to seek the aid of these facilities at the earliest possible moment. In Sweden under a government system there are available to the people free diagnostic services and free transportation to government clinics with easy access to surgery and radium. Nevertheless, these facilities do not seem to have reduced materially either the deaths from cancer or the death rates. In a personal inquiry made to the physician in charge of one of the great cancer centers—the Radium Hemmet in Stockholm—he said that the public still fears cancer so greatly as to postpone the visit to the general practitioner in rural areas, who is in the vast majority of cases the first physician consulted."



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attack

Date of
termination
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Miscellany

HUMAN FOOT TODAY TARGET OF UNBELIEVABLE CHEMICAL ABUSE

"The human foot has become the target of unbelievable chemical abuse," according to an article in the February 2 issue of The Journal of the American Medical Association.

Four investigators—G. B. Underwood, M. D.; L. Edward Gaul, M. D.; Eileen Collins and Mabel Mosby, all of Evansville, Ind., state that patients' feet today are "painted all the colors of the rainbow" or daubed thick with salves, powders and ointments.

The Journal article says that "the patients, when questioned about the number of remedies used, shrug their shoulders and exclaim 'I couldn't begin to recall. I've used everything. I've had this stuff between my toes for years. Just when I think it is well, it's back again. Each time it comes back I try something else. I've spent a small fortune for remedies, and look at my poor feet.'"

The authors say there is a preponderance of advertising urging patients to apply various remedies for inflammation of the feet,

especially for "athlete's foot" which is caused by fungi. "Every channel of advertising implores the sufferers: to put your fungus to sleep; to stop fierce, torturing, maddening itch; to relieve and quiet the burning; to soothe stinging; to heal ugly cracks and to allay suffering and pain."

The investigator's report that they had studied the cases of 400 patients who had applied an assortment of remedies before their first visit to a physician. The average number of preparations used was four, but if the dermatitis or foot inflammation was recurrent the number would exceed 10 or sometimes 20.

"In this series," the authors say, "40 per cent of the patients (160) showed positive reactions to one or more of the remedies used . . . As the number of remedies applied increased, so did the incidence of positive reactions. Any patient who shopped long enough would sooner or later apply a salve, tincture, lotion or powder that would contain an irritant or sensitizer."

In 56 of the 160 patients the irritation was due to one of the organic mercurials. Merthiolate and phenol caused some of the reactions. In 69 cases, or 43 per cent, the tars and derivatives were the offenders.

The investigators suggest that all preparations containing mercury designed for skin application carry a "warning" on the label of the presence of a sensitizing agent. "The normal skin is apparently well equipped to withstand mercury contacts," the article says, but adds: "An injured skin or skin shorn of its protective layers, particularly a skin already inflamed by contactants, is favorable soil for mercury to induce sensitization."

The four writers point to the many preparations advertised in both medical and lay

publications. All of the preparations are chemically different, the article says, but each a specific for certain foot troubles.

"Pamphlets arrive also with quotations from eminent medical authorities who found this a specific or that a specific 'to eliminate fungous infection ringworms without irritation.' Furthermore, and herein lies the tragedy, it has spread into the American home. The daily, weekly and monthly periodicals display an urgent message how to diagnose, prevent and treat athlete's foot.

"Several decades ago the bowel was being symptomatically dosed. Each abdominal complaint had myriads of potions and concoctions all of which, if given a trial, would effect curative miracles. The bowel has had its therapeutic renaissance, but the skin, its symptoms and even its signs of disease are being symptomatically daubed and painted. A chemical and pharmacologic exposure of the oral cure-alls caused their mysterious and divinatory healing powers to vanish. Many were worthless, others actually or potentially dangerous. When the cutaneous oils, creams, salves, lotions, tinctures and powders are chemically and pharmacologically exposed, many of them will prove worthless. Many are already actually and potentially dangerous. It took the tragedies from self medication to end oral dosing; tragedies from self treatment of skin diseases are mounting."

The article urges the Council on Pharmacy and Chemistry of the American Medical Association to "'clean house' in the field of cutaneous drugs as it did with oral and parenteral drugs; tear apart the concoctions and define each cutaneous chemical in terms of dosage, indications and contraindications, and declare each therapeutic agent according to its chemical and pharmacologic properties."

IMMEDIATE SURGERY REDUCES DEATH RATE FROM RUPTURED SPLEEN

Immediate operation reduces fatalities among patients with ruptured spleens caused by injury, according to two Boston doctors writing in the February 2 issue of The Journal of the American Medical Association.

H. William Scott Jr. and J. Robert Bowman, from the Department of Surgery, Har-

vard Medical School, observed seven patients with ruptured spleens at the Childrens Hospital, Boston, from 1937 to 1944. Six of the seven patients were operated on within three hours after entry to the hospital, while one was observed for 16 hours before surgery was performed. All recovered.

The authors state that "the general mortality resulting from this injury in all age groups as indicated by the literature has averaged about 30 per cent. In recent years the mortality has declined." The complete elimination of mortality from this injury lies with immediate surgery. The doctors attribute the improvement "to earlier recognition with prompt surgical intervention and to the greater availability of blood and blood substitutes and their use in replacing the blood loss."

All of the functions of the spleen are not known, but the fact that it is a part of the blood-forming mechanism is fairly well established. The spleen is not essential to life, however, since it has been shown that when it is removed because of injury or disease at any age, the expectation of life is not affected. It is a large glandlike organ situated in the upper part of the abdominal cavity on the left side.

The symptoms in splenic rupture are abdominal pain, acute blood loss, varying degrees of shock, pallor, nausea and vomiting, according to the authors.

All the patients were boys ranging in age from 4 to 13 years. Three of the seven patients were injured in falls and three in sledding accidents; one was struck by a falling object.

NEW USE FOUND FOR OLD DRUG IN RELIEF OF MUSCULAR SPASMS

An old drug, physostigmine, has been put to a new use by three doctors who find that it is effective in relieving muscle spasms and some of the pain in rheumatoid arthritis.

Abraham Cohen, M. D., and Philip Trommer, M. D., both of Philadelphia, and Joel Goldman, M. D., of Lewistown, Pennsylvania, writing in the February 2 issue of The Journal of the American Medical Association reject their previous recommendation of neostigmine, a drug which was successfully used in the treatment of muscle spasm

in poliomyelitis. They found this drug impractical because of the expense involved when used in large quantities. Physostigmine was selected for study because it is closely related in action to the former drug.

Rheumatoid arthritis is a chronic disease characterized by stiffness and soreness of the muscles and swelling of the joints. The swelling is due to the collection of fluid in the joint space and the thickening of the tissues surrounding joints. Loss of muscle strength, decrease in muscle size and limitation of muscle endurance in the region of the involved joints occur in various degrees and may develop rapidly. It is of unknown origin, affecting many organs and systems of the body. The muscle spasms have been a problem because they persist even though the arthritic process is in an arrested stage. Muscle spasm results in limitation of motion, deformities, weakness, fatigue and pain on pressure or stretching of the affected part.

The authors conducted their study in the special arthritis wards of the Philadelphia General Hospital. From their observations they conclude that physostigmine is successful in giving immediate relief from muscle spasms and for preventing deformities and moreover it is an expensive form of treatment.

In explaining the purpose of their study, the authors state that "the incidence of rheumatoid arthritis is so great and the various forms of therapy so numerous that it is our purpose to reduce the treatment of this disease to the simplest denominator. Any form of therapy that tends to minimize deformities should be considered worthy of consideration. Our object in this writing is to (1) prevent deformities in rheumatoid arthritis, (2) lessen the severity of deformities already formed, (3) simplify the drug used, (4) lessen the cost to the patient and (5) relieve pain."

In conclusion the authors found that there were fewer undesirable reactions with physostigmine than with neostigmine. They say: "The lesser frequency of complaints with physostigmine made for better patient cooperation . . . It is because of this and for reasons aforementioned that we have substituted physostigmine for neostigmine in all our studies. As will be noted, physostigmine bears out our original premise in respect to clinical improvement. It relieves

muscle spasm and therefore relieves pain in many instances. The relief is common to a large portion of cases and is frequently encountered within 15 to 30 minutes after injection."

JOURNAL CONDEMNS NEW NAMES FOR PENICILLIN PRODUCTS

In an editorial titled "Silly Names for Penicillin Products," The Journal of the Medical Association says in its February 2 issue that "leaders in the drug and chemical industries, apparently avid for the kind of profits that can be derived from well-exploited medical specialties, have let their imaginations and their greed run riot in a search for specific trade names to designate some penicillin products."

The editorial says that the name "penicillin," which truly reflects the source of the product, was deliberately chosen as a descriptive title. The modesty of the investigators led them to avoid using their proper names as the title of the product.

"Instead of selling penicillin under its simple and well known name," the editorial says, "they (the manufacturers) have become downright silly and offer penicillin under so many names that only a professional solver of cross-word puzzles could guess the nature of the products that these names conceal."

Some of the new penicillin names which the editorial listed were: Amphocillin, Penioral, Bucillin, Topicillin, Delacillin, Ledercillin-G, and Per-Os-Cillin.

"Some of these are for oral use," The Journal says, "some for local application, one is to be mixed 'before taking' with something else. The promulgators of these products and their sale are interested in helping their own pocketbooks by trying to make certain that the prescribing physician will limit himself to their products. One manufacturer naively combines his firm name with 'cillin.' There are more than 20 manufacturers . . .

"But who could guess that Amphocillin and Bucillin refer to penicillin for oral use? Who can believe that Delacillin is really penicillin in peanut oil and beeswax? You might surmise the nature of Ledercillin-G, but we will lay eight to five that you would miss on Penioral."

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ANNOUNCES

SURGICAL POSTGRADUATE SEMINAR

MARCH 26-29, 1946

TUESDAY, MARCH 26, 1946

- 9:00—Discussion and Case Presentation of:
Chronic Frontal Sinusitis
Lye Burns of the Esophagus
Chronic Otitis Media with Cholesteatoma
Cancer of the Lung
Esophageal Manifestations of Pellagra
Carcinoma of the Larynx
Gilbert E. Fisher.
- 11:00—Hemorrhoids—Movie: Surgical Technique
Julius E. Linn.
Tuberculosis of the Anus, Case Report
W. J. Rosser
Ano-Rectal Fistulae
Neal Andrews.
- 12:00—Lunch
- 2:00—The Management of Thoraco-Abdominal Wounds
J. M. Mason, III.
- 3:00—Amphitheatre Clinic
Dr. Alton Ochsner, Professor of Surgery, Tulane University.
- 4:00—*Surgical Movies
Surgical Staff
- 8:00—Bronchiogenic Carcinoma
Dr. Alton Ochsner.

WEDNESDAY, MARCH 27, 1946

- 9:00—Backache and Sciatica, Diagnosis and Treatment
Benjamin Meyer.
Non-Union of Fractures of the Long Bones, Treatment and Results
H. Earle Conwell.
Hip Joint Disabilities in the Adult
John D. Sherrill.
- 11:00—*Surgical Anatomy (Cadaver Demonstration)
Charles M. Goss
- 12:00—Lunch
- 2:00—*Surgical Pathology
Roger D. Baker
- 3:00—Diagnosis and Treatment of Brain Tumors
Walter G. Haynes.
- 8:00—Indications for Splenectomy
Roy R. Kracke.

ADDRESS: Seminar Committee, The Medical College of Alabama

620 South 20th Street, Birmingham, Alabama

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THURSDAY, MARCH 28, 1946

- 9:00—Tumors of the Breast: Diagnosis, Surgical and Radiation Therapy
John L. Carmichael and K. F. Kesmodel.
- 10:00—Round Table—Problems of Gallbladder Surgery
Earle Drennen, Moderator; W. H. Beddow, J. M. Donald and Hugh Linder.
- 11:00—Discussion of Certain Problems of Thyroid Diseases
S. L. Ledbetter, Jr.
The Surgical Management of Thyrotoxicosis—Use of Thiouracil
Robert F. Guthrie.
- 12:00—Lunch
- 2:00—Clinico-Pathologic Conference
J. M. Mason.
- 3:00—Amphitheatre Clinic
Dr. Lon Grove, Associate Professor of Clinical Surgery, Emory University.
- 4:00—Use of Blood and Blood Plasma in Surgery
W. H. Riser, Jr.
- 8:00—The Surgical Management of Chronic Gastric and Duodenal Ulcer
Dr. Lon Grove.

FRIDAY, MARCH 29, 1946

- 9:00—Surgery of the Acute Abdomen
D. C. Donald.
- 10:00—Panel Discussion: Ambulatory, Minor and Industrial Surgery. Ben M. Carraway, Moderator; C. J. Donald, Claude H. Ford and J. Ralph Morgan.
- 11:00—Modern Advances in Colon Surgery
Frank Wilson.
- 12:00—Lunch
- 2:00—Management of Hernias: Illustrative Cases
G. J. Roscoe.
- 3:00—Pediatric Urology.
- 4:00—Carcinoma of the Prostate.
Bruno Barelare.
- *Review may be arranged any day between 1 and 2 p. m.

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BACKGROUND

OVER THREE DECADES OF CLINICAL EXPERIENCE

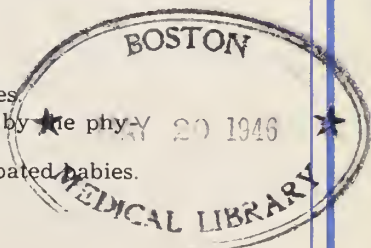
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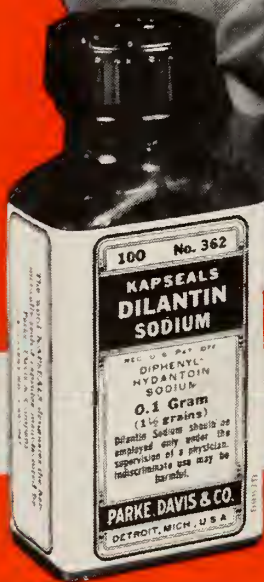
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CAUDAL BLOCK ANESTHESIA AND THE GENERAL PRACTITIONER

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Gadsden, Alabama

Search for the ideal obstetrical anesthetic has continued since the earliest records. Hingston and Edwards,¹ in adapting the forty-year-old caudal block anesthetic to obstetrics, have made a definite contribution. Indeed, in many centers, its proponents state that it is the very near approach to, if not the realization of, the ideal anesthetic. Limited clinical material makes difficult the evaluation of any specialized procedure by the physician in private practice. In determining the ideal obstetrical anesthetic, illustrated stories by laymen, and our very own doctors, who impart medical education to the public do not greatly alleviate the difficulty. When the ideal obstetrical anesthetic is found, if ever, it must be applicable by the general practitioner if it is to be of most benefit. The purpose of this paper is to report the experience of an average physician doing continuous caudal block over a period of two years in a small general hospital staffed with graduate nurses who have had no experience with this anesthetic. The meticulous asepsis and thorough knowledge of technic of administration of continuous caudal block anesthesia are not discussed here. If both are not above reproach, it should not be attempted since the bedside of a patient in labor is no place to perfect either.

The flexible needle technic of Hingston and Edwards was first used. This was discontinued because the patients complained of discomfort due to lying in the same posi-

tion for several hours. In our hands, the flexible needle was more difficult to insert than the rigid 15-gauge. To obviate these difficulties, single injections were used late in labor. This enabled us to have the advantage of the ease of maintaining the sterile field and having the cooperation of the patient during delivery. Solutions of adrenalin with novocaine, pontocaine with cobeferin, and novocaine were used. These enabled us to get anesthesia lasting as long as two and three-quarter hours. They were discontinued because they all appeared to delay labor and the accoucheur tended to make the procedure fit the anesthetic.

Single injections of long lasting solutions should prove a very fertile field for further investigations in obstetrics, surgery and intractable painful diseases of the perineum and lower pelvis. Its pharmacologic action would appear to make it useful in sympathetic block of the lower extremities. Hence, it should be of value in treating vascular diseases of the lower extremities, and determining results that might be obtained by operation in hypertension.

The following discussion is based upon one hundred cases of continuous caudal block anesthesia, using 1½% metycaine or novocaine solution in .85% sodium chloride solution. It has not been possible to distinguish novocaine and metycaine solutions clinically, although it is possible that the onset of anesthesia with metycaine is slightly quicker after administration than with novocaine. Earlier, the 13-gauge needle with the No. 5

1. Hingston, R. A., and Edwards, W. B.: Continuous Caudal Anesthesia During Labor and Delivery, *Anesth. & Analg.* 21: 301-311, 1942.

Fr. nylon boilable catheter was used.² Later, the 15-gauge needle and the special B-D No. 4 Fr. caudal catheter, sterilizable in autoclave, were used. The anesthetic was begun as soon as the patient was judged to be definitely in labor; i. e., having pains at regular intervals with definite progress and dilatation of the cervix. At times, a patient was seen, particularly a multipara, with three-fingers dilatation of the cervix, who was not judged to be in labor, inasmuch as she were suffering no pain and making no definite progress. The primipara with the thick cervix was judged to be in labor when the pains were firm and regular, and the cervix was thinning even though definite dilatation of the cervix was not demonstrable. The initial injection was 30 cc. of the above solution, injected over a period of ten minutes, with close observation of pulse and subjective signs. Too rapid injection caused vomiting, headache and local discomfort. At no time was treatment required for untoward reaction, other than slowing the rate of injection, nor was the anesthetic discontinued because of symptoms. The solution was then injected at the rate of 15 cc. every twenty-five minutes, which proved sufficient in the majority of cases. If it was not sufficient, the interval was decreased to twenty minutes, the dosage remaining the same. If skin anesthesia reached the umbilicus, the interval was increased to thirty or thirty-five minutes. At any time the anesthetic was allowed to get to the costal margin, the progress and labor ceased. After the quantity required was determined, it remained approximately the same and the injections continued at that interval until after delivery. This was done to obviate sensation tested by pin prick which, over a period of hours, can prove quite tedious. Twenty cubic centimeters caused tingling and anesthesia over the area supplied by lumbar 5 nerve segment of the perineum; 25 cc. give anesthesia of lumbar 2 and below, or from the hips down; 30 cc. give anesthesia of thoracic, or midway between the symphysis and the umbilicus.³ The sen-

sation transmitted to the fingers when introducing the needle is quite definite as to what structures are being pierced and there is no excuse for force being used at any time. No oxytocics were used before or after delivery unless definitely indicated by relaxation of the fundus or hemorrhage *vida intra*. Fluids were allowed freely throughout labor. Immediately after delivery of the baby, the patient was given $\frac{1}{2}$ gr. of codeine and 5 gr. of aspirin by mouth. Patients were asked to void before beginning the anesthetic and, if their output was unsatisfactory, they were catheterized every six hours. Thirty-seven patients were catheterized during labor. The anesthetic, apparently, interferes with the micturition reflex.

RESUME' OF CASES*

Of the 133 vaginal deliveries within the past two years, 18 were judged unsuited at initial examination, 12 in routine x-ray of the pelvis, and 6 by local conditions, such as infections, pilonidal cysts, old scars and injuries. Eight (8) expressed a dislike and 7 were seen too late in labor; i. e., delivery was anticipated within forty minutes. Having found caudal block satisfactory for fifteen years for lower abdominal and perineal surgery for the poor risk, no obstetrical patient was denied this type of anesthetic because of poor physical condition. Prematurity was considered a definite indication of continuous caudal block anesthesia because it depressed respiration little if any. Our limited experience bears out pharmacological action and current literature that the procedure is particularly indicated in toxemias with hypertension. Continuous caudal anesthetic by catheter technic was attempted on the remaining one hundred with the following results: 89 were considered successful, the criterion of a successful anesthetic being taken arbitrarily as the statement of the patient that she had no pain during delivery with the initial $1\frac{1}{2}$ gr. of sodium pentobarbital repeated not more than every six hours. Included are eight cases that had one dose and three cases that had two doses at six-hour intervals. Hyoscine, instead of barbiturates, was given in six cases because of hypotension. The indications for these drugs were complaints of nervousness and

2. Irvin, F. R.; Lippincott, C. A., and Meyer, F. C.: Continuous Caudal Anesthesia in Obstetrics; Demonstration of Catheter Technic for Administration, New York State J. Med. 43: 1023-1027, 1943.

3. From Control of Pain in Childbirth. Clifford B. Lull, M. D. and Robert A. Hingson M. D.; Lippincott 1944.

*From records of the Baptist Memorial Hospital, Gadsden.

sleeplessness. The remaining eleven had varying degrees of anesthesia to none at all and were given different amounts of the currently popular amnesic drugs. In three of the series, the administration was discontinued because of obtaining blood. In recent practice, if blood is obtained, the position of the needle is changed and the injection continued. There were three stillbirths, their heart beats not being heard upon admission. One fetal death was ascribed to a true knot in the cord. There was no maternal mortality. The babies were born pink, and forty-eight of them gave evidence of respiration before delivery of the body. It is of utmost importance that mucus be aspirated from the throat as soon as the mouth appears. There was a maternal morbidity of 3%; that is, a temperature of 100.4° or more on two consecutive days following delivery. This figure is much below my average over fifteen years. It is ascribed to the ease of maintaining a sterile field and a relaxed, cooperative patient that enables better anatomical repair.

There were twenty-four forceps applications after the head was on the perineum, and seven mid-forceps, with instrumental rotation in two. Three versions were done, one of which was for prolapsed cord after it had ceased pulsating. This patient had a fairly thick cervix with four-fingers dilatation. The cervix was incised and the extraction done, a living child being delivered. Apparently, the anesthetic abolishes the abdominal-perineal reflex. This probably explains the high number of prophylactic forceps deliveries, but it also prevents many precipitate deliveries before a sterile field is obtained.

Sixty-one (61) were primiparas. There were 67 episiotomies with repair. Two extensive rectoceles were repaired at this time because the economic factor precluded a second admission to the hospital. We kept them in bed two weeks. The puerperium was uneventful and six weeks' follow-up showed an excellent perineum. This is not advised as a routine.

There was one patient with eclampsia who had had five convulsions. After caudal block anesthesia was begun, there were no more convulsions, the blood pressure dropped from 176/120 to 148/96, and the puerperium was uneventful.

The majority of the eleven failures were unexplained. Some of them had sacral deformities not demonstrated in the routine x-ray. All of them had the currently popular amnesic drugs, disregarding the previous caudal anesthetic.

Of nine cesareans done over this period, caudal block was attempted in all. Six were judged as successful anesthetics; i. e., required no further anesthetic. One had a small amount of ether when the peritoneum was incised. Blood oozed from the needle in another and the attempt was discontinued. One was an unexplained failure. The operation in these two cases was finished with an open ether anesthetic. The babies all lived. Artificial respiration was required in none of the babies delivered with the caudal block anesthesia.

Blood loss was not measured, but it was definitely less than with drugs previously used. Frequently, no blood was seen except that accumulating behind the placenta in its separation.

The average drop in blood pressure was 18 mm. mercury, the greatest being 70 systolic and 30 diastolic. The greatest drop was from 184/108 to 114/78 in a patient with toxemia, *vide supra*.

SUMMARY

1. A resume' is given of two years' experience by a general practitioner in a general hospital with continuous caudal anesthesia in obstetrics.

2. The doctor attempting it without meticulous asepsis and a thorough knowledge of anatomy and technic is inviting failure, and probably an inexcusable tragedy.

3. Patients with continuous caudal anesthesia require more sedation for the first eight hours after delivery than with amnesic drugs.

4. Blood loss is less. Babies are born pink. Mothers are cooperative, and a sterile field is more easily obtained with continuous caudal anesthesia.

5. Caudal block anesthesia proved ideal in six of nine classical cesareans.

6. Obstetrical procedures are planned and carried out with deliberation and serenity of a medical diagnosis or a surgical procedure.

TUBERCULOSIS SURVEY OF THE PRISON POPULATIONS OF ALABAMA

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Montgomery, Alabama

Early in 1945 an x-ray survey for the detection of pulmonary tuberculosis was conducted in the Alabama State Prisons. In the absence of radiographic examinations of the chest, the incidence of this disease in such institutions is largely a matter of conjecture, the fact being well established that physical examination with painstaking percussion and stethoscopy is an entirely inadequate means of detecting minimal tuberculosis. It is during this early stage of the disease that persons with tuberculosis are most readily amenable to gratifying therapeutic results, and naturally constitute much less of a public health problem than do persons with advanced disease.

Whereas most persons who defer medical investigation until symptoms of tuberculosis present themselves are found to have advanced disease when finally x-rayed, the majority of pulmonary lesions uncovered in x-ray surveys prove to be minimal in extent.^{1, 2, 3} From the economic standpoint alone, it would seem to be desirable to concentrate on the detection of early cases. With early diagnosis the amount of money and time sacrificed by the patient during the period of convalescence is reduced; a greater number of patients could be treated adequately per annum per sanatorium bed; vocational rehabilitation could be carried out with relative ease; and the fact that the patient has not had an opportunity to infect a horde of contacts—known and unknown during the period of latent infection—all serve to indicate the irrefutable wisdom of including an x-ray examination of the chest as part of all routine physical examinations.

From the Tuberculosis Control Division of the Alabama State Department of Health.

Acting Director, Tuberculosis Control Division, Alabama State Department of Health; Senior Assistant Surgeon (R), U. S. Public Health Service.

1. Hilleboe, H. E., and Gould, D. M.: *Conquest of Tuberculosis in Industry*, J. A. M. A. 1944: 125, 241.

2. Idem: *Tuberculosis Control in Industry*, Dis. of Chest 1945: 11, 278.

3. Hilleboe, H. E., and Newitt, A. W.: *Small Film Radiography in Industrial Groups*, *Journal-Lancet* 1945: 65, 133.

A number of facts suggest that surveys of prison populations should be effective in finding cases of pulmonary tuberculosis:

1. In general the prison population emanates from a low stratum of society; i. e., persons with meagre incomes and of a low educational level, who have experienced a poor quality of nutrition, clothing and shelter. The incidence of tuberculosis is known to be particularly high among such groups of people.

2. Since confinement in prisons makes for repeated, prolonged contact and exposure among inmates, and because other variable factors may contribute to lower the general resistance of the prisoner, tuberculosis may be transmitted more readily within the confines of such institutions than under normal civilian circumstances.

3. The average age of most prison groups is between 25 and 45 years. It is during this period of life that tuberculosis exacts its greatest toll.

4. Previous experience in prison surveys indicates that the incidence of tuberculosis is considerably in excess of that found in surveys conducted on average population groups. A review of the American literature reveals that there is a dearth of information on the subject. Reisner, in a presentation of the results of a survey of the New York City Prisons, reported radiographic evidence of chronic pulmonary tuberculosis (active and inactive) in 3.7 percent of the female inmates and in 10.6 percent of the males. Follow-up investigations revealed that a significant number of these cases were found to be active. Analysis of the "short-term" group, comprised of persons committed for a term not exceeding 30 days on charges of disorderly conduct, alcoholism and vagrancy, revealed that 12.9 percent had chronic pulmonary tuberculosis, almost 50 percent of which cases were found to be of clinical significance.⁴ Bettag reported the incidence of tuberculosis in the

4. Edwards, H. R.: *Tuberculosis Case Finding*, Suppl. to *Am. Rev. Tuberc.* 1940: 41. Reisner, D.: *Tuberculosis Survey of Prison Populations of New York City*, pp. 96-108.

penal institutions of Illinois to be 2.3 percent.⁵ Russakoff, in conducting a survey of the Florida State Prison late in 1944, found the incidence of tuberculosis to be slightly in excess of 3 percent.⁶ Hilleboe has reported in a number of publications with several collaborators that the incidence of reinfection pulmonary tuberculosis found among more than one million industrial workers in this country is approximately 1.5 percent.^{1, 2, 3, 7} Accepting this sample as being representative of the presumably healthy industrial population, the average age of which fall between 25-45, it is immediately obvious that surveys of prison populations offer excellent opportunities for finding cases of pulmonary tuberculosis.

On the basis of these considerations it was decided that a survey of the inmates of the various Alabama State Prisons would prove to be valuable for several reasons:

1. By uncovering asymptomatic, unsuspected cases at this time, the further spread of the disease intramurally could be checked. Early cases could be adequately treated and would never constitute a menace to the health of the prison population, or to the community to which they might subsequently return.

2. The current tuberculosis problem would be defined, thus providing prison authorities with reliable data. This information could well be utilized as a basis for planning adequate facilities to cope with the problem of tuberculosis in the future.

3. A study of the contacts of prisoners found to have active disease might contribute materially in our present State tuberculosis control program.

The institutions comprising the Alabama State Penal System are: (a) Atmore Prison Farm for men, (b) Draper Prison, relatively recently constructed, for men, (c) Kilby Prison, a maximum security prison for men and (d) Julia Tutwiler Prison, the institution for women. All four prisons have facilities for both races.

Of these prisons, Kilby alone has an x-ray machine and facilities for the isolation and treatment of male patients with tuberculosis.

5. Bettag, O. L.: Tuberculosis in Prisons, *Dis. of Chest* 1945: 11, 313.

6. Russakoff, A. H.: Unpublished data.

7. Hilleboe, H. E., and Morgan, R. H.: *Mass Radiography of the Chest*. The Year Book Publishers, Inc. 1945. p. 27.

Inmates of Draper and Atmore who are found to have the disease are transferred to the Kilby tuberculosis ward. At the time of writing, a physician trained in diseases of the chest supervised the treatment of patients on this ward on a part-time basis. At that time no one of the prisons had a full-time physician in attendance because of the acute shortage of doctors. Moreover, routine x-ray examinations of the chest have not been part of the admission physical examination.

Female prisoners with tuberculosis are isolated on the Julia Tutwiler Prison Hospital wards. It might be mentioned in passing that plans are now being made to provide this institution with a tuberculosis hospital. This unit will contain an x-ray machine, pneumothorax apparatus and isolation facilities.

ANALYSIS OF THE MATERIAL

A total of 2,867 apparently well prisoners were examined (*Fig. 1*). (Individuals found to have suspicious or definite infiltrations on 35 mm. film were recalled for a conventional

FIGURE 1. SUMMARY OF TUBERCULOSIS SURVEY
—ALABAMA STATE PRISONS BY SEX AND RACE

Sex and Race	Number of Persons	Number of Cases	Percent
White Female	74	2	2.7
White Male	1131	53	4.7
Total White	1205	55	4.6
Colored Female	180	7	3.9
Colored Male	1482	44	3.0
Total Colored	1662	51	3.1
Total Group	2867	106	3.7

14x17 inch celluloid film.) Of the total group, there were 74 white females, 1,131 white males, 180 colored females and 1482 colored males. One hundred and six (106) (3.7%) had radiographic evidence of reinfection pulmonary tuberculosis. Of this group, 83 (78.3%) were minimal in extent, 19 (17.9%) were moderately advanced, and 4 (3.8%) were far advanced. In addition there were five cases diagnosed as suspicious for reinfection pulmonary tuberculosis and one case of pleural effusion of undetermined etiology. These cases are not included in the results of this survey.

White Inmates: Of 1,205 white inmates examined, 74 (6.1%) were females and 1,131 (93.9%) were males. Radiographic evidence of pulmonary tuberculosis was noted in 55 instances (4.6%) in the total white group, only two of which cases were detected

among females. Of these 55 cases, 43 (78.2%) were minimal in extent, 10 (18.2%) were moderately advanced, and only 2 (3.6%) were far advanced. The incidence among white males was 4.7%, while females had an incidence of 2.7% reinfection pulmonary tuberculosis.

The average age of the entire white group was 33.4 years, that of white males being 33.6 years, and that of white females 28.4 years. It is worthy of note that the average age of the white male prisoners found to have tuberculosis was 39.1 years, or 5.5 years older than the average age of white males examined. The average age of the two white females with tuberculosis was 27.0 years, or 1.4 years younger than the average age of their respective group.

Colored Inmates: Of the total group of colored inmates numbering 1,662, 180 (10.8%) were females, and 1,482 (89.2%) were males. Radiographic evidence of reinfection pulmonary tuberculosis was found in 51 instances (3.0%). Of these 40 (78.4%) were minimal, 9 (17.7%) were moderately advanced, and 2 (3.8%) were far advanced. It is of interest to note that in the colored group, in contrast to the white group, the females have a higher incidence than do the males, 3.9% and 3.0% respectively.

The average age of the entire colored group was 32.2 years, that of males being 32.6 years, and that of females 29.1. The average age of the colored males with tuberculosis was 41.6 years, or 9 years older than the average of that particular group. On the other hand, the average age of colored females found to have tuberculosis was 29.3 years, a variation of no significance from the average age of this group.

In addition to the cases found during the conduct of this survey, there were 27 white and 30 colored men on the tuberculosis ward at Kilby Prison, and one white and 5 colored women isolated in the Julia Tutwiler Prison Hospital. Two white men, both considered to be inactive, were not isolated. Including these known cases, the over-all incidence of pulmonary tuberculosis is 5.5 percent—7.1 percent for white men, 4.0 percent for white women, 4.9 percent for colored men and 6.5 percent for colored women. (See Fig. II)

DISCUSSION

Analysis of the results of this survey discloses the incidence of reinfection pul-

FIGURE 11. OVER-ALL INCIDENCE TO PULMONARY TUBERCULOSIS—ALABAMA STATE PRISONS BY SEX AND RACE

Sex and Race	Num- ber of Per- sons	Num- ber of Cases	Per- cent
White Female	75	3	4.0
White Male	1160	82	7.1
Total White	1235	85	6.9
Colored Female	185	12	6.5
Colored Male	1512	74	4.9
Total Colored	1697	86	5.1
Total Group	2932	171	5.8

monary tuberculosis to be highest among white males (4.7%), next highest in colored women (3.9%), third in colored men (3.0%) and least among white females (2.7%). To some it may be somewhat surprising to learn that the incidence of tuberculosis in the entire white group was higher (4.6%) than in the colored (3.1%). To be sure, mortality rates lead one to conclude that the morbidity should be higher among the Negroes than among whites, especially since the tuberculosis death rate in Alabama during the years 1940-44 inclusive for colored as compared to whites was almost 3:1 as an average.* Nevertheless, this relatively lower prevalence in morbidity among colored groups has been an almost consistent finding in numerous surveys conducted on a variety of population groups.^b

It is to be noted that the total number of women examined is small, and therefore is perhaps of little statistical significance. However, in this particular survey the incidence of tuberculosis was higher among colored females than among white women, while the reverse was true of the male groups studied. Upon discussing this matter with the officials of the Department of Corrections and Institutions,^c we learned that approximately 60 percent of the colored women now imprisoned have been committed on charges closely akin to or arising from a state of vagrancy. Rigid restrictions to cope with the venereal disease problem have been responsible in no small measure for the increased percentage of inmates committed on this charge. The incidence of tuberculosis being high among vagrants, an increased proportion of such individuals in the colored fe-

*Information obtained from the Alabama State Bureau of Vital Statistics.

8. Edwards H. R.: Tuberculosis Case Finding, Suppl. to Am. Rev. Tuberc. 1940:41.

9. Personal conversation with Mr. Arthur Heustess, Assistant Director, Department of Corrections and Institutions, Montgomery.

male population may reflect itself significantly in effecting an unexpectedly higher incidence in this particular group.

There can now be little doubt that the course of the tuberculosis infection is quite different among Negroes than among whites. Pathologically, it has not been uncommon to observe rapidly progressive and fulminating disease among non-whites, a form of the disease not commonly noted among Caucasians.¹⁰ McPhedran and Opie¹¹ have concluded that both primary and reinfection tuberculosis show less tendency to heal among Negroes than among whites. Everett's studies¹² on a series of fatal hospital cases indicate that the average duration of illness was approximately three times as long among whites as in Negroes. Graham, Auston and Putman,¹³ in a report of their experience in a rural area of East Alabama, found during the course of a five-year study that 38.6% of whites and 85.2% of the Negroes with tuberculosis were deceased, the mean duration of the disease for the former group being 4.5 years and 1.2 years for the latter.

Such being the case, what could be the explanation for the lower incidence of tuberculosis among Negroes in this survey? On casually questioning a number of ward attendants and general supervisors, it was learned that a high index of suspicion was directed at colored inmates. Among Negroes, the rapid change in general condition, attitude and physical capacity, coupled with the basic information that tuberculosis is a common yet serious disease, all serve to raise suspicions, frequently leading to an early diagnosis. Consequently, the duration of exposure in colored institution groups under such circumstances may be shorter and isolation more prompt than in similar conditions among Caucasians, who are "known"

to have a cigarette cough, chronic bronchitis and such; the course of whose disease is indolent; who show little if any striking constitutional change over a period of years; and whose signal manifestation of a serious latent pulmonary infection may be hemoptysis. Thus the obvious conclusion to be drawn is that, in general, one can expect to find a lower incidence of tuberculosis among groups of supposedly well colored persons than among whites.

Increasing attention has been focused on the age factor in tuberculosis. A review of the extensive literature on this subject has led Rich¹⁴ to the conclusion that "at different periods of the life span there are striking differences in the clinical manifestations, the prognosis, the character of lesions, the mortality and epidemiology of tuberculosis." In planning case-finding surveys it is well to study persons in age groups ranging from 20 to 45 in order to detect the greatest number of lesions, thus lowering the cost per case found. In this particular study, the average ages of the various groups ranged from 28.4 to 33.6 years. The average ages of groups of inmates with tuberculous infiltrations spread from 27.0 to 41.6 years. If the average ages of these groups are superimposed upon the tuberculosis mortality charts of Alabama,¹⁵ two interesting observations can be made (*Figure III*):

1. The average ages of the tuberculous women show no great variation from the average ages of their respective group. Nevertheless, it is noteworthy that the average age of the tuberculous colored women falls very close to the highest peak in mortality for that group, whereas the average age of the tuberculous white women falls near the mortality peak for that decade.

2. The average age of tuberculous white and colored men show a shift in the direction of mortality peaks.

A few further details about the survey may be indicated. The question of activity has been omitted since it has not been possible to reexamine radiographically all of the positive cases found. A decided effort is being made by the prison authorities to cope with their problem despite handicaps in

10. Rich, A. R.: *The Pathogenesis of Tuberculosis*, Charles C. Thomas, 1944, pp. 133 and ff.

11. McPhedran, F. M., and Opie, E. L.: *The Spread of Tuberculosis in Negro Families*, Am. J. Hyg. Mono. Ser. 16, 1940, pp. 1-56.

12. Everett, F. R.: *The Pathological Anatomy of Pulmonary Tuberculosis in the American Negro and in the White Race*, Am. Rev. Tuberc. 1933: 27, 411.

13. Graham, A. H.; Auston, P. W., and Putnam, P.: *The Fate of Persons Exposed to Tuberculosis in White and Negro Families in Rural Area of East Alabama*, Am. J. Hyg. Mono. Ser. 16, 1941 pp. 149-185.

14. Rich, A. R.: *The Pathogenesis of Tuberculosis*, Charles C. Thomas, 1944, p. 208.

15. Taken from Palmer, C.: *Tuberculosis in the United States*, Medical Research Committee, National Tuberculosis Association, 1943.

ALABAMA

TUBERCULOSIS MORTALITY BY AGE

AVERAGE ANNUAL RATE BY SEX AND COLOR, 1939-1941

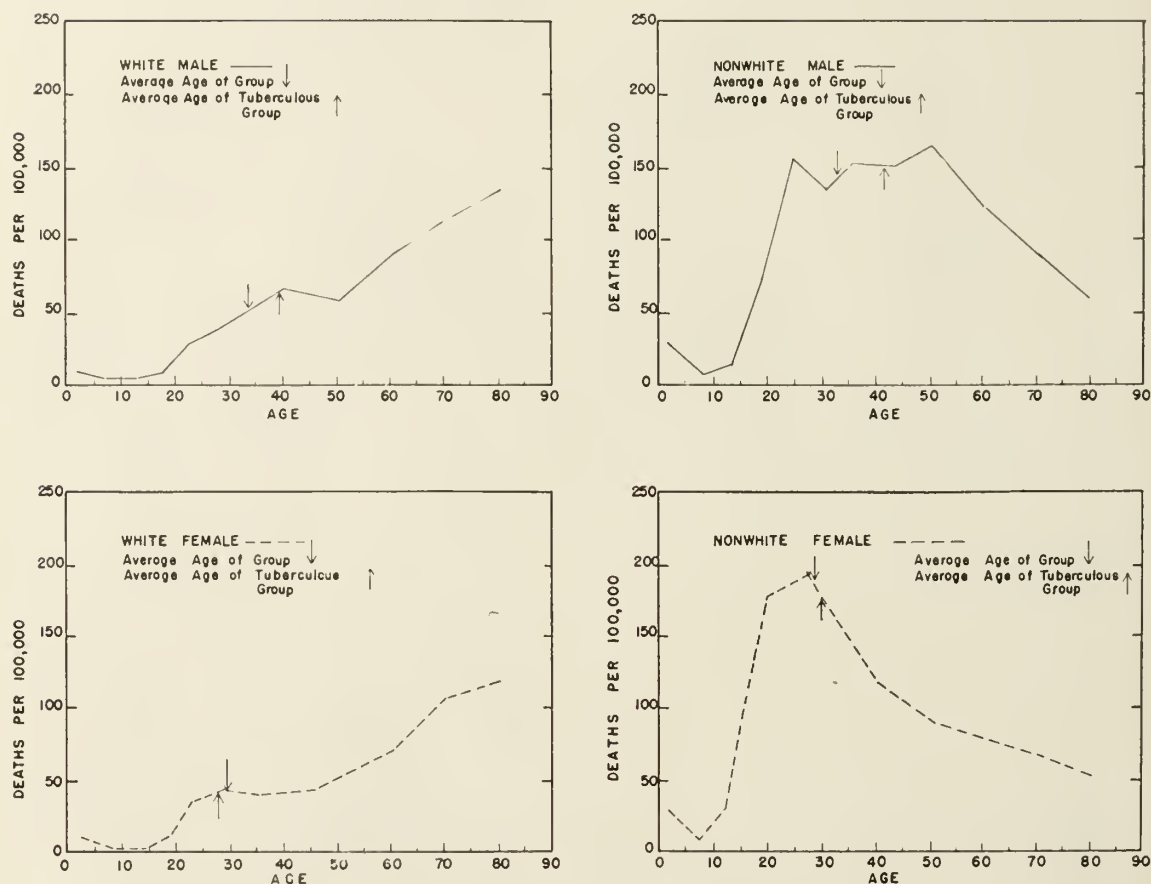


FIG. III - See text.

personnel and facilities. Nevertheless, much has been accomplished to date:

(1) Inmates who constituted obvious public health problems have been isolated.

(2) Bacteriologic studies are being carried out on others.

(3) The Tuberculosis Control Division of the State Health Department is being informed of tuberculous inmates who are about to return to the "free world," and in turn the proper County Health Officers are being notified. Also, household contacts of infectious persons are being studied.

(4) Inmates found to have non-infectious lesions will be followed with periodic radiographic examinations.

(5) Routine x-ray examinations of the chest will be made on each new admission when x-ray film becomes more readily available.

(6) Postwar plans for the improvement of present facilities include separate modern

tuberculosis hospitals for male and female prisoners.

Thus through the cooperation of the Department of Corrections and Institutions this survey has been successful in the detection of a high percentage of tuberculosis among inmates.

In finality the ideal plan for the control of tuberculosis in prisons in cooperation with the state-wide tuberculosis control program should include x-ray examinations at the time of admission of every inmate and employee, periodic surveys such as the one conducted and described here, and a chest plate immediately prior to discharge or transfer, this last examination to protect that group which the prisoner ultimately joins.

SUMMARY

The results of a survey for pulmonary tuberculosis in the Alabama State Prisons are reported.

Analysis of the material indicates that tuberculosis constitutes an important public health program among prisoners in this State.

Reference has been made to some of the various factors affecting the incidence and race disproportion among inmates found to have tuberculosis.

The advantages and need for routine radiographic examinations of the chest as a reliable means of detecting tuberculosis in

its early, less dangerous stages have been emphasized.

The author gratefully acknowledges the cooperation of the Alabama State Department of Corrections and Institutions, and the helpful suggestions made by Dr. D. G. Gill, Director of the Bureau of Preventable Diseases, Alabama State Department of Public Health, and Mr. C. A. Millspaugh, Division of Public Health Methods, U. S. Public Health Service. The Jefferson County Anti-Tuberculosis Association provided a record analyst for this study.

SIMULTANEOUS SPLENECTOMY AND NEPHRECTOMY

REPORT OF CASE

CHARLES J. DONALD, JR., M. D.
Birmingham, Alabama

A review of the literature of the past ten years reveals that only five cases of simultaneous splenectomy and nephrectomy for traumatic rupture have been reported. It would appear certain that as a result of the recent war many cases will have been added. In an injury serious enough to rupture the left kidney, one should always bear in mind the likelihood that the spleen may be involved. It would also appear that the anterior approach would be much the better for the removal of both of them. We should like to add one more case.

C. A. J., age 29, was admitted to the hospital on Jan. 1, 1945. He had been driving a truck when he collided with a train. A passing car picked him up and brought him to the hospital. On admission he was conscious and complained of much pain in the left side of the abdomen and the left flank. The left side of the abdomen was moderately rigid and quite tender. There was also an abrasion over the left flank. In addition, he had a small laceration of the scalp which was sutured immediately. His blood pressure was 90/60 on admission. A flat x-ray of the abdomen was made and the left kidney was obscured. He was unable to void and an attempt to catheterize him was unsuccessful due to a urethral stricture. Since his condition was quite satisfactory, it was decided to wait until morning before placing a catheter in if he was still unable to void.

The next morning he was definitely more comfortable and his blood pressure was still 90/60. Dr. Robert Cothran was called in

consultation and passed a retention catheter. Grossly bloody urine was obtained. The hemoglobin and red blood count were the same as on the preceding night, the former being 64% and the latter 3,240,000. He was given 500 cc. of citrated blood. It was thought wise to observe him a few more hours before deciding definitely whether he should be explored.

At 4:30 P. M. the same day he was more comfortable and a little distended. The blood pressure was 125/75. A Wangenstein type of gastric suction was advised for his distention. Shortly after passing the nasal tube he went into moderate shock and his blood pressure dropped to 85/45. He perspired profusely and complained of much more pain in the abdomen and left flank. There also seemed to be a definite bulge in the left flank. The distention was definitely greater. It was decided that he should have a celiotomy immediately. While the operating room was being set up he was given another transfusion of 500 cc. of citrated blood.

The anesthetic was given by Dr. Alfred Habeeb, ether being used for its action in contracting the spleen and thereby lessening the hemorrhage.

A long left rectus incision was made. On entering the abdomen much free blood was found in the abdominal cavity. The descending colon was lying next to the anterior abdominal wall, due to a large collection of blood in the retroperitoneal space on the left side. The spleen was located and found to have a large rent in it. It was removed and

the pedicle doubly ligated with No. 1 chromic catgut. Then a longitudinal incision was made in the peritoneum, lateral to the descending colon. The colon was retracted medially and a very large retroperitoneal clot was evacuated. It was found that the left kidney had been broken into two parts. The renal artery was attached to one portion and the renal vein to the other. The kidney was then removed and the pedicle doubly ligated with No. 2 chromic catgut. Three Penrose drains were left in the retroperitoneal space and brought out through the left flank that had been prepared with antiseptics before the operation started. Five grams of sulfanilamide were placed in the retroperitoneal space and the posterior peritoneum was then sutured over with continuous No. 1 catgut. The anterior wound was then closed by interrupted figure-eight stainless steel wire sutures. These were placed through the anterior rectus fascia, the rectus muscle, the posterior rectus fascia and peritoneum and back again through the anterior rectus fascia. Silk was used for the skin.

The patient received 2000 cc. of citrated blood while on the operating table. His immediate postoperative condition was excellent. His systolic blood pressure remained 100 or over during the entire procedure. Since he had only one kidney left, and because of a recent Neisserian infection, 15,000 units of penicillin were given every three hours.

His postoperative course was complicated by a very severe paralytic ileus which seemed to resist all treatment. The Wangensteen nasal suction remained in place for sixteen days. He was further supported with blood and penicillin.

On his sixth postoperative day a moderate amount of purulent fluid was evacuated from the anterior wound. The next morning, while getting an enema, his wound disrupted for about $3/5$ ths of its length. He was taken back to the operating room immediately and a second closure was done, using through and through wire sutures, under sodium pentothal anesthesia. He withstood the procedure well. Following this, for two days, his pulse was rapid, 120-130, but the temperature was not elevated. After this, the pulse and the distention gradually subsided. The nasal suction was discontinued on the six-

teenth day. The wire sutures remained in place for twenty-one days.

In the ninth week following his original operation, the patient was married. He returned to work the eleventh week. There was no evidence of a postoperative hernia at the time of his dismissal.

We believe the success of this case is probably due to the fact that we were able to defer surgery long enough to get sufficient blood to combat the shock of the operation. It would have been impossible, or quite difficult, to do this procedure through a posterior kidney incision.

One should not procrastinate too long before operating on the patients.

Pulsating Hematoma—The most important feature in operation on these lesions is to be able to control the bleeding from above. This can many times be satisfactorily done with a properly applied tourniquet, but in wounds of the upper thigh this is not always practicable. It is extremely essential that a dry field be present before the operation is undertaken. Therefore, the main vessels should be exposed above the lesion in order directly to control the bleeding. A temporary tape or rubber band can be placed around the proximal artery and vein and removed later without danger. Thus the vessel can be accurately obliterated, whereas, when an approach is made through the original wound, attempt at occlusion may be accomplished by much difficulty. It is not always ideal to do a true arteriorrhaphy or an endo-aneurysmorrhaphy once the sac has been evacuated. This cannot be done when the rent in the vessel is extensive or the separation of the ends is great. If the vessel is lacerated, repair may be accomplished by the suture, but the majority of war wounds will have segmental defects in the vessel wall. A careful evacuation of the hematoma must then be made with identification of the vessel ends. When the clots are removed, the occlusion of the proximal and distal portions can be accomplished. This can be brought about by carefully placed interrupted silk sutures in the vessel ends or ligation in the ordinary manner. The temporary tapes or bands on the vessel or tourniquet above are then released in order to ascertain the presence of further bleeding. It is important not to pack the cavity tightly, because the pressure of packing interferes with the blood supply to surrounding muscles and the entire extremity. There should be adequate opportunity for drainage of blood, serum or pus, particularly since most of these wounds are potentially infected. Primary closure of the wound is contraindicated when these cases are operated on as an emergency because of rupture or threatened rupture.—*Martin, J. M. A. Georgia, Feb. 46.*

A CANCER DETECTION CLINIC IN INDUSTRY

A PRELIMINARY REPORT

FRENCH H. CRADDOCK, SR., M. D.

And

FRENCH H. CRADDOCK, JR., M. D.

Sylacauga, Alabama

The fight against cancer continues from many directions. One group of workers is trying to find the cause, but, from a practical standpoint, this is not very satisfactory to date. Another group has tried to make the individual cancer conscious, but made so, and left without further guidance, the individual is in a state of helpless fear. The diagnostician has greatly increased his ability to locate cancer in every part of the body. The surgeon has improved his technique and is saving more lives than at any other time in the history of surgery. The roentgenologist is helping in the lifesaving job in a very fine way. But still—the medical man does not get the cancer patients early enough.

Cancers are rated as (1) early, (2) moderately advanced, and (3) late. In point of time, no one knows what these ratings really mean, because there is no way to know when the cancer actually began its growth.

A different approach to the ones mentioned above would be to examine a number of individuals over and over again at stated intervals. If, after the first examination, a cancer was discovered, it could be stated with fair certainty that cancer began to develop during the interim period between examinations.

Working in cooperation with Mrs. Ray Meade, of Birmingham, Commander of the Alabama Division of the Field Army, American Cancer Society; the Executive Committee of the State Field Army Division; the Cancer Committee of the State Medical Association—Dr. J. P. Chapman, Chairman; and the State Cancer Commission under Dr. B. F. Austin, State Health Officer, and Dr. D. G. Gill, Director, the first industrial cancer detection clinic in the United States was organized and put into operation at the Drummond Fraser Hospital, Sylacauga, Alabama, in August 1944.

The Drummond Fraser Hospital is the employee's hospital of the Avondale Mills,

From the Department of Surgery, F. Hood Craddock Memorial Clinic.

and this clinic is enthusiastically sponsored by Mr. Hugh Comer, President, Avondale Mills.

The Cancer Clinic has in mind the regular, periodic examination of all women over 29 years of age connected in any way with the Avondale Mills. All are eligible, but it is entirely voluntary. The Field Army provides the forms, records and posters, and Mr. Comer very generously allows the facilities and personnel of the Drummond Fraser Hospital to be used. Women of the local chapter of the Field Army, under the leadership of Mrs. French H. Craddock, Jr., take the histories. Clinics are held on Monday, Wednesday and Friday afternoons. The physical examinations (Form 2) are made

FIELD ARMY, AMERICAN SOCIETY FOR THE CONTROL OF CANCER

I hereby authorize the Cancer Prevention Clinic of the Field Army of the American Society for the Control of Cancer, Drummond Fraser Hospital, Sylacauga, Alabama, to give a resume' of my physical examination to _____

Address _____

Signature _____

Date _____

Form 3

FIELD ARMY, AMERICAN SOCIETY FOR THE CONTROL OF CANCER

Patient's Name _____

Date of original appointment: _____

Date of second appointment: _____

Date visited: _____

By: _____

Reason for failure to keep appointment: _____

Appointment made for: _____

Clinic No.: _____

Form 4

FIELD ARMY, AMERICAN SOCIETY FOR THE CONTROL OF CANCER

Sylacauga Cancer Prevention Clinic
Drummond Fraser Hospital
Sylacauga, Ala.

Please return for follow-up visit at _____ o'clock on _____. If unable to return at this time, please call 1100 for a new appointment.

Please bring this card with you.

Form 5

Clinic No. _____

Clinic No.

Address:

Name:

	Date		Date		Date		Date		Date	COMMENTS
	No	Yes	No	Yes	No	Yes	No	Yes		
Skin: 1. Any moles or growth on skin If so, where?										
G. I. 1. Sore gums:										
2. Bleeding gums:										
3. Sore throat:										
4. Hoarseness over two weeks:										
5. Difficulty in swallowing:										
6. Indigestion:										
7. Vomiting:										
8. Vomiting of blood:										
9. Pain in abdomen:										
10. Constipation:										
11. Diarrhea:										
12. Black tarry stools:										
13. Blood in stools:										
14. Painful bowel movements:										
15. Change in bowel habits:										
16. Gain or loss in weight:										
Pelvic: 1. Irregular menstruation:										
2. Painful menstruation:										
3. Excessive bleeding:										
4. Bleeding between periods:										
5. Bleeding after menopause:										
6. Vaginal discharge:										
7. Backache:										
8. Painful urination:										
9. Blood in urine:										

Form 1

FIELD ARMY, AMERICAN SOCIETY FOR THE CONTROL OF CANCER

SYLACAUGA CANCER PREVENTION CLINIC

Private Physician: _____ Clinic No. _____
 Address: _____ Hospital No. _____
 Name _____ Race _____ Hospital No. _____
 Address: _____ Phone _____ Children _____
 Occupation: _____ Age _____ S M W D _____
 Family History of Carcinoma: _____
 Past Medical History: _____ Contraceptives _____
 Operations: _____

Pelvic Examination	Date	Examiner	Date	Examiner
Vulva and Vagina: _____				
Cervix: Palpation: _____				
Inspection: _____				
Schiller test: _____				
Probe test: _____				
Biopsy: _____				
Pathologist report: _____				
Pathologist: _____				
Uterus: Palpation: _____				
Diagnostic curettage: _____				
Pathologist report: _____				
Pathologist: _____				
Adnexa: _____				
Treatment advised: _____				
Treatment carried out: _____				
Breasts: Inspection: _____				
Masses: _____				
Symptoms: _____				
Biopsy: _____				
Pathologist report: _____				
Pathologist: _____				
Treatment advised: _____				
Treatment carried out: _____				
Mouth: Inspection: _____				
Laryngoscopy: _____				
Biopsy: _____				
Pathologist report: _____				
Pathologist: _____				
Treatment advised: _____				
Treatment carried out: _____				
Thyroid: _____				
Skin: Inspection _____				
Treatment advised: _____				
Treatment carried out: _____				
Rectum: Palpation _____				
Treatment advised: _____				
Treatment carried out: _____				
Urinalysis: _____				
Other Findings: _____				
Hospital admission advised: _____				
Admitted: _____	Date: _____	Chart No.: _____	Date: _____	Chart No.: _____

**FIELD ARMY, AMERICAN SOCIETY FOR THE
CONTROL OF CANCER**

Sylacauga Cancer Prevention Clinic
Drummond Fraser Hospital
Sylacauga, Ala.

You did not receive your scheduled examination on _____
at _____ o'clock on _____ or if unable
to do so, telephone 1100 for an appointment.

Please bring this card with you.

Form 6

Clinic No. _____

**FIELD ARMY, AMERICAN SOCIETY FOR THE
CONTROL OF CANCER**

Patient's Name _____

Clinic No. _____

Follow-up card given to: _____

Date: _____

Visited patient on: _____

Results: New appointment ☐

Date: _____

Could not locate: ☐

Refused to return: ☐ Reason: _____

Moved ☐

New Address: _____

Form 7

by the writers, and repeated every six months. A complete urine and blood examination, including Wassermann test, is also made.

You will notice that this examination includes all the possible locations which can be seen or palpated. If, from the history, we have suggestions of other areas, such as larynx, gastrointestinal tract and urinary tract, they are investigated.

It is too early to evaluate properly this approach to the cancer problem. We are now in the process of enumerating the many pathologic conditions found in the first 300 cases. Several cancers have been found, and some too late. The thing that surprised us has been the number of pathologic conditions found other than malignancy.

The forms are self-explanatory. The records are kept by the Record Librarian of the Drummond Fraser Hospital, Miss Margaret Ann Sumner. Form 3 is used whenever the individual decides to have this record transcribed and sent to another physician. Form 4 gives the appointment date. Forms 5 and 6 are used for appointment notification. These are stamped postcards. Form 7 is used by the Field Army worker for follow-up purposes in cases where the appointments are not kept.

Prophylaxis of Neurosyphilis—Neurosyphilis in part is preventable; among recognized syphilitics, the 25% expectancy of its development in untreated patients may be reduced by means of routine spinal fluid study, appropriate intensification of treatment in those patients with abnormal fluids in either early or late syphilis, and the use of fever therapy in patients who are serologically resistant to other measures, to a probable 5% or less. The chance of "curing" clinical neurosyphilis once it has developed, or even of obtaining complete symptomatic relief, is not nearly so great as this. The saying "An ounce of prevention is worth a pound of cure," is applicable in neurosyphilis.

There is an unfortunate barrier in many neurosyphilitic patients; it is impossible to apply the prophylactic effect of treatment because the patient is unaware of his infection until neurological symptoms appear. The majority of patients with these grave forms of neurological involvement can give no history of obvious early or late lesions of syphilis and they are totally unaware of the fact they are infected until disaster overtakes them. It is the infected, but unrecognized syphilitic who is the huge and nearly untouchable reservoir of neurosyphilis. The only solution is the determined effort by physicians to recognize syphilis by means of routine serological tests of patients reporting for any medical complaint, and particularly by means of the examination of patients known to be infected. When the serological test is positive for syphilis a follow-up with a study of the cerebrospinal fluid will reveal the possible liability to neurosyphilis.

The examination of families of neurosyphilitic patients is another essential procedure. There is clinical evidence to a neurotrophic strain of treponema. It was long ago known that several individuals infected from a single source might all develop neurosyphilis. The married partners, husband or wife, of patients with tabes or paresis are found twice as liable to suffer from neurosyphilis as an unselected group of syphilitics.

Examination of the husband or wife of a neurosyphilitic patient should constitute a serological test, a careful physical and neurological examination, and should there be the slightest suggestion of neurological abnormality, routine study should be made of the cerebrospinal fluid even if the blood was found negative. Moore found in wives of four parietic patients spinal fluids when all other examinations revealed nothing. Routine lumbar puncture is not necessary in the children of neurosyphilitic parents unless there is clinical evidence of congenital syphilis or a positive serological test is present.—*Lascara, Virginia M. Monthly, March '46.*

**ANNUAL MEETING
OF THE
ASSOCIATION
BIRMINGHAM
APRIL 16-18, 1946**

PRIMARY JEJUNAL ULCER

REPORT OF CASE

JOHN L. CARMICHAEL, M. D.

And

WILLIAM E. DOGGETT, M. D.

Birmingham, Alabama

Although secondary ulcers of the jejunum are fairly common, primary ulcers of this area are rare. While peptic ulcers of the stomach and duodenum are extremely common, and amebic, tuberculous, typhoid and nonspecific lesions are found in the ileum and large bowel, pathologic lesions of any kind are relatively infrequent in the jejunum. Peptic ulcers of the duodenal bulb are the most common of the peptic ulcers and the incidence decreases as the ampulla of Vater is approached, and duodenal ulcers below the level of the ampulla seem to be almost non-existent. One wonders, as has been suggested, if the alkaline bile and pancreatic juices may not protect the bowel against ulcerations in areas below the ampulla.

Ebeling¹ in 1933 made a complete survey of the English literature and found only 47 cases of primary jejunal ulcer reported between 1827 and the time of his study. Only 42 of these had sufficient data for statistical study. Seven of these 42 were operated upon with the diagnosis of non-perforated ulcer. The first of these seven non-perforated cases was reported in 1910. This patient had had pain in the epigastrium for years, and at operation the jejunum was found to be dilated, and a chronic ulcer was present 4 cm. below the duodeno-jejunal fold. Six out of the seven cases with non-perforation survived surgery.

Oudard and Jean² found 19 cases from the non-English literature and Berry and Dailey³ reported 9 additional cases up to 1938, plus a case of their own bringing the total up to 76 cases.

Because of the extreme rarity of primary jejunal ulcers and because of the associated mortality, the following case is reported.

1. Ebeling, W. W.: Primary Jejunal Ulcer, *Ann. Surg.* 97: 857, 1933.

2. Oudard and Jean: Simple Ulcer of the Small Intestine, *Arch des Maladies de l'Oppariel Digestif*, 15: 208, 1925.

3. Berry, L. H., and Dailey, U. G.: Primary Ulcer of Jejunum, *Am. J. Digest. Dis.* 7: 63-65 (Feb.) '40.

CASE REPORT

E. B., Hillman Hospital 152833, colored male, age 35, came to the emergency clinic of Hillman Hospital on October 24th, 1941, and was admitted to the service of one of us (J.L.C.). His chief complaint was severe pain in the epigastrium.

For the past 4 or 5 years the patient had had mild gastrointestinal disturbances similar to those of peptic ulcer. However, he had been able to lead a fairly normal life. Four hours prior to admission, as he began to get up out of bed, a sudden severe epigastric pain developed which gradually spread over his abdomen and became more and more severe. This pain was so severe that the patient was unable to give details of the present history or any past history.

Physical examination revealed a colored male patient, well developed and well nourished, in acute abdominal distress. His temperature was 99 degrees. His pulse was 88 per minute, and his blood pressure was 75/50. His head, ears, nose and throat were normal. The lungs were clear. The heart size was within normal limits and the sounds were of good quality. The abdomen presented a board-like rigidity with generalized tenderness. No palpable masses were present. Examination of the genitalia, rectum and extremities showed no evidence of disease. The neurologic examination revealed no abnormality.

Laboratory findings were hemoglobin 81% and white blood count 11,400—with 76% neutrophils. Urinalysis was negative except for an occasional pus cell. Blood Wassermann was 4 plus.

An upright x-ray of the abdomen showed a narrow column of air beneath both leaves of the diaphragm, and both diaphragmatic shadows were rather high.

Preoperative diagnosis was ruptured peptic ulcer.

Operation was performed under ether anesthesia by Dr. Dowdy, the surgical resident, in the presence of one of us (J.L.C.).

A high right rectus incision was made and the peritoneal cavity opened. The stomach and duodenum were examined and found to be normal. The jejunum was found to be constricted and just below the constriction an ulcer with perforation was found. This ulcer was estimated to be 36 inches below the ligament of Treitz. The ulcer was resected and the constriction cut longitudinally and then sutured transversely. Triple O intestinal suture was used and reinforced with black silk. The peritoneum was closed with continuous chromic No. 1, and the muscle and fascia with interrupted chromic No. 1, and the skin approximated with clips.

The patient reacted promptly after arriving on the ward and the following day his general condition was good. The upper end of the incision disrupted slightly on the 6th postoperative day, but this had healed by November 27th, the date of discharge, the 33rd postoperative day.

The patient could not be contacted because he had gone to another city to work in October 1944, but his wife stated that he had had almost no trouble with his stomach since the operation. He was well in March 1945, except for an injury received in a defense plant.

The pathologic report as given by Dr. Roger D. Baker, after recent study of the sections, is as follows:

The microscopic sections show a chronic ulcer of the small intestine. The appearances are those of non-specific ulcer. The sections do not clearly demonstrate the point of perforation and the ulcer is seen extending to the main muscular coat. The muscle beneath the base of the ulcer is infiltrated with chronic inflammatory cells, most of which are plasma cells. There are gland-like structures, perhaps, unusually deep in the inner portion of the wall, but it is not entirely clear that these are ectopic glandular areas. There is nothing anywhere to suggest gastric mucosa.

In the sections there are great numbers of plasma cells which are consistent with either a syphilitic lesion or an ordinary peptic ulcer. There is no particular perivascular arrangement of the inflammatory reaction and this is probably against syphilis and in favor of peptic ulcer. There is no necrosis in the form of caseation at any point and this is in favor of peptic ulcer. No giant cell reaction is noted and this again is in favor of peptic ulcer.

The possibility of staining spirochetes in non-caseous tissue of this sort in an adult is very slight and the proper formalin fixed or paraffin-embedded tissue is not available now, 4 years after the operation, so that we cannot take the

problem one step further and demonstrate the presence or absence of spirochetes.

It seems to me that the histologic appearances are all in favor of the ulcer being of the peptic variety rather than syphilitic in origin, since all of the appearances are like those of the usual peptic ulcer of the stomach or duodenum and features frequently noted in syphilitic lesions are not present.

The general appearance of the ulcer is quite like that of the usual peptic ulcer of the stomach or duodenum.

The etiology of ulcers of the jejunum is as obscure as that of duodenal and gastric ulcers. No specific agent is known. Theories include focal infection with streptococcus and other bacterial agents, thrombosis, endocrine disorders and trauma. In some of the earliest cases reported there was believed to be gastric mucosa present in and near the ulcer, and it was this acid-producing tissue which was given as the etiology. However, in more recent years no heterotopic gastric mucosa has been found in microscopic study. In the case presented we have no plausible etiology to offer for an ulcer located 36 inches below the duodenum with symptoms of five years duration before perforation. It is interesting to note that there are several cases where perforation was preceded by straining.

Most of the cases are recorded as chronic punched out ulcers with narrowing of the lumen and usually only minute perforations. The most common site reported is in the first one-half of the jejunum in the antimesenteric portion of the bowel. Apparently chronicity tends to stricture formation and it is this feature that makes a roentgen diagnosis possible for there may be found dilatation and ileus of the jejunum. Microscopically the ulcers showed varying degrees of round cell infiltration and fibrosis. In nine cases multiple ulcers were recorded.⁴ In the cases reported here we believe the constricted area proximal to the perforation indicated a previously existing ulcer now healed and succeeded by an area of fibrosis.

The greatest number of reported cases were in the age group between 30 and 55, and the sex ratio was approximately 3 males to one female. The predominant complaint was pain in the upper abdomen, severe in the perforated groups but varying from dis-

4. Dowdle E.: Multiple Non-Specific Jejunal Ulcers With Chronic Duodenal Dilatation, *Ann. Surg.* 116:348 (September) 1942.

comfort to gnawing pain in the non-perforated. In only 12% of cases did the pain resemble that of duodenal ulcer and food sometimes relieved it and at other times aggravated it.

Acute perforation occurred in all except nine cases and this was ushered in with severe pain in the mid-abdomen. Shock, board-like rigidity, tenderness and air under the diaphragm are recorded. In 1940, Williams⁵ calculated the mortality from the 52 cases in literature to be 53%. Forty-three (43) had perforated and a total of 28 died.

Once the diagnosis is made, operation is indicated whether or not there is perforation. At the operating table, in the presence of peritonitis when no perforation can be found in the stomach, duodenum, appendix or Meckel's diverticulum, the jejunum should be explored.

Surgical treatment in acute perforation includes (1) resection of the ulcer, (2) closure without resection, using a purse-string suture or Lambert sutures, (3) biopsy with closure of ulcer, (4) resection of a portion of the jejunum, and (5) rarely excision of the ulcer and then an enteroenterostomy. Resection of the ulcer is probably the procedure of choice.

SUMMARY

A case of ruptured primary jejunal ulcer has been presented.

The infrequent occurrence and the etiology of primary jejunal ulcer have been discussed.

Several methods of treatment of such ulcers have been indicated.

Radiation Therapy—The actual mechanism by which radiation exerts its influence upon tissues is still not fully understood. The fundamental effect resulting from the passage of radiation through matter is the production of ions by transfer of energy to the atoms of the substance which is being irradiated. All of the phenomena associated with radiation are, therefore, secondary to the ionization produced by it. Such ionization in tissue cells results in profound microchemical disturbances, including a partial breakdown and recombination of proteins, changes in intracellular colloid osmotic pressure and in the relationships of intracellular and extracellular fluids, and alterations in the activity in cell enzymes. Any or all these disturbances may be responsible for

the biological response subsequently manifested by the cell.—Kaplan and Wilson, *J. Connecticut M. Soc.*, March '46.

Extra-Intestinal Amebiasis—Amebiasis merits far greater attention than is usually given to it for several reasons. In the first place it is much more common than is generally believed. It may give rise to very serious symptoms and be disabling; or, as a result of one or more of its numerous complications, it may be the direct cause of death. The likelihood of occurrence of these dangerous complications seems to be roughly proportional to the chronicity of the disease. Amebiasis is amenable to treatment and can usually be cured by modern methods of therapy.

Endamoeba histolytica is capable of invading practically all of the organs and tissues of the human body. Such invasion nearly always takes place from the intestinal tract where the primary infection occurs. These extra-intestinal sites of metastases are quite numerous and constitute some of the most important and serious disease states, producing both medical and surgical problems. Various diagnostic problems may be created as a result of amebic involvement of distant organs. However, if the physician is cognizant of this fact; and if he gives due consideration to the numerous available laboratory procedures which have proved so helpful in the diagnosis of extra-intestinal amebiasis, he will find the diagnosis quite easy in the majority of cases.

Thus, it seems justifiable to attempt a discussion of these extra-intestinal lesions and to present the findings accumulated from the literature which have proved to be so helpful in directing the physician's attention toward the correct diagnosis. It is quite impossible to relate in detail the interesting and important facts concerned with each type of lesion. Therefore, the greatest part of this paper will be devoted to the most frequently encountered organ lesions due to infection by *Endamoeba histolytica*. These will be considered in detail, whereas the less common lesions warrant only a brief discussion. A number of the reported extra-intestinal complications are so rare as to be considered medical curiosities.

The most important and by far the most common of all the complications of amebiasis is amebic infection of the liver. It is difficult to determine accurately the relative frequency of complicating amebic hepatitis and hepatic abscess in intestinal amebiasis. Statistics vary considerably and depend upon a number of factors. Statistical analysis based on postmortem cases reveals a higher incidence of this complication than those based upon clinically observed infections. In one series of 5211 fatal cases of amebiasis 36.6 per cent had hepatic abscess. Futcher reported 27 cases of liver abscess as occurring among 119 clinical cases of amebic dysentery. In Ochsner's and DeBailey's review of the literature 160 (17.1 per cent) of 1933 cases had hepatic involvement.—Galloway, *New Orleans M. & S. J.*, Feb. '46.

5. Williams, L. W.: Ruptured Primary Jejunal Ulcer, *J. M. A. Georgia* 30:21 (January) 1941.

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NATIONAL HEALTH PROGRAM OF THE AMERICAN MEDICAL ASSOCIATION

ADOPTED BY THE BOARD OF TRUSTEES AND THE
COUNCIL ON MEDICAL SERVICE
FEB. 14, 1946

The Board of Trustees of the American Medical Association and the Council on Medical Service of the American Medical Association have taken a long step toward protection of the American people against the costs of sickness through participation in a voluntary prepayment sickness plan now developed under the authority of the American Medical Association.

The fundamental step in the development of this plan was the establishment of standards of acceptance for medical care plans which have the approval of the Council on Medical Service of the American Medical Association. Any plan which meets the standards of the Council will be entitled to display the seal of acceptance of the American Medical Association on its policies and on all its announcements and promotional material. In order to qualify for acceptance, the prepayment plan must have the approval of the state or county medical society in the area in which it operates. The medical profession in the area must assume responsibility for the medical services included in the

benefits. Plans must provide free choice of a qualified doctor of medicine and maintain the personal, confidential relationship between patient and physician. The plans must be organized and operated to provide the greatest possible benefits in medical care to the subscriber.

Medical care plans may be in terms of either cash indemnity or service units, with the understanding that benefits paid in cash are to be used to assist in paying the costs incurred for medical service. The standards also include provisions relative to the actuarial data that are required, systems of accounting, supervision by appropriate state authorities and periodic checking and reporting of the progress of the plan to the Council.

Coincidentally with the announcement of these standards of acceptance, there was organized, as a voluntary federation, an organization known as Associated Medical Care Plans, Inc. This independent association will include as members all plans that meet the minimum standard of the Council on Medical Service of the American Medical Association. The Associated Medical Care Plans will undertake to establish coordination and reciprocity among all of these plans so as to permit transference of subscribers from one plan to another and use of the benefits in any state in which a subscriber happens to be located. Under this method great industrial organizations with plants in various portions of the United States will be able to secure coverage for all of their employees. Moreover, it will be possible for the Veterans Administration, welfare and industrial groups as well as government agencies, to provide coverage for the people in any given area through a system of national enrollment. In addition, the Associated Medical Care Plans, Inc., will undertake research and the compilation of statistics on medical care, provide consultation and information services based on the records of existing plans and engage in a great campaign of public education as to the medical service plan movement under the auspices of state and county medical societies.

The Board of Trustees of the American Medical Association also announced the establishment under its Council on Medical Service of a Division of Prepayment Medical

Care Plans with a director and a staff who will administer the activities of the Council on Medical Service related to the promotion and development of medical care plans in all of the states.

In announcing its proposal for a nationwide provision of sickness insurance on a mutual nonprofit basis, the Association through its President and the Board of Trustees authorizes the publication of its complete health program with the ten points, which include the development of services in the field of preventive medicine, maternal and child health, voluntary prepayment plans for protection against the costs of sickness, compensation for loss of wages due to illness, the care of the veteran and the development of a high standard of housing, nutrition, clothing and recreation. The American Medical Association last June through its Board of Trustees and Council on Medical Service announced a 14-point program to improve the health and medical care situation in the United States. In October 1945 the interpretation of these 14 points and methods of implementation were adopted by the Council on Medical Service. In December 1945, the House of Delegates approved the whole program, suggested its rearrangement and directed the Board of Trustees to keep the program constantly up to date so that it will stay at least even with and, if possible, a step ahead of the needs of the public.

With this in mind the Board of Trustees has adopted a restatement of the 14-point program, which clarifies still further the position of the American Medical Association on some of these points and brings into the program more definitely such matters as maternal and child welfare, medical research, the medical care of the veteran and the part to be played by the voluntary health agencies.

This restatement follows:

1. The American Medical Association urges a minimum standard of nutrition, housing, clothing and recreation as fundamental to good health and as an objective to be achieved in any suitable health program. The responsibility for attainment of this standard should be placed as far as possible on the individual, but the application of community effort, compatible with the maintenance of free enterprise, should be en-

couraged with governmental aid where needed.

2. The provision of preventive medical services through professionally competent health departments with sufficient staff and equipment to meet community needs is recognized as essential in a health program. The principle of federal aid through provisions of funds or personnel is recognized with the understanding that local areas shall control their own agencies as has been established in the field of education. Health departments should not assume the care of the sick as a function since administration of medical care under such auspices tends to a deterioration in the quality of the service rendered. Medical care to those unable to provide for themselves is best administered by local and private agencies with the aid of public funds when needed. This program for national health should include the administration of medical care including hospitalization to all those needing it but unable to pay, such medical care to be provided preferably by a physician of the patient's choice with funds provided by local agencies with the assistance of federal funds when necessary.

3. The procedures established by modern medicine for advice to the prospective mother and for adequate care in childbirth should be made available to all at a price that they can afford to pay. When local funds are lacking for the care of those unable to pay, federal aid should be supplied with the funds administered through local or state agencies.

4. The child should have throughout infancy proper attention including scientific nutrition, immunization against preventable disease and other services included in infant welfare. Such services are best supplied by personal contact between the mother and the individual physician but may be provided through child care and infant welfare stations administered under local auspices with support by tax funds whenever the need can be shown.

5. The provision of health and diagnostic centers and hospitals necessary to community needs is an essential of good medical care. Such facilities are preferably supplied by local agencies, including the community, church and trade agencies which have been responsible for the fine development of

facilities for medical care in most American communities up to this time. Where such facilities are unavailable and cannot be supplied through local or state agencies, the federal government may aid, preferably under a plan which requires that the need be shown and that the community prove its ability to maintain such institutions once they are established.

6. A program for medical care within the American system of individual initiative and freedom of enterprise includes the establishment of voluntary nonprofit prepayment plans for the costs of hospitalization (such as the Blue Cross plans) and voluntary nonprofit prepayment plans for medical care (such as those developed by many state and county medical societies). The principles of such insurance contracts should be acceptable to the Council on Medical Service of the American Medical Association and to the authoritative bodies of state medical associations. The evolution of voluntary prepayment insurance against the costs of sickness admits also the utilization of private sickness insurance plans which comply with state regulatory statutes and meet the standards of the Council on Medical Service of the American Medical Association.

7. A program for national health should include the administration of medical care, including hospitalization, to all veterans, such medical care to be provided preferably by a physician of the veteran's choice with payment by the Veterans Administration through a plan mutually agreed on between the state medical association and the Veterans Administration.

8. Research for the advancement of medical science is fundamental in any national health program. The inclusion of medical research in a National Science Foundation, such as proposed in pending federal legislation, is endorsed.

9. The services rendered by volunteer philanthropic health agencies such as the American Cancer Society, the National Tuberculosis Association, the National Foundation for Infantile Paralysis, Inc., and by philanthropic agencies such as the Commonwealth Fund and the Rockefeller Foundation, and similar bodies have been of vast benefit to the American people and are a natural outgrowth of the system of free enterprise and democracy that prevail in the

United States. Their participation in a national health program should be encouraged and the growth of such agencies when properly administered should be commended.

10. Fundamental to the promotion of the public health and alleviation of illness are widespread education in the field of health and the widest possible dissemination of information regarding the prevention of disease and its treatment by authoritative agencies. Health education should be considered a necessary function of all departments of public health, medical associations and school authorities.

MEDICAL COLLEGE OF ALABAMA LIBRARY

Contributed by

Mildred R. Crowe, Librarian

The Library of the Medical College of Alabama is now established in its temporary quarters on the sixth floor of the Jefferson-Hillman Hospitals. This Library, which is the only medical library in the State, has as its principal purposes:

First, the acquisition, maintenance, circulation and preservation of medical literature for the students and faculty of the Medical College and all physicians of Alabama, and

Second, the acquisition, maintenance and permanent preservation of all historical material, both book and non-book, pertaining to medicine in Alabama.

The Library is open from 8:30 A.M. to 10:00 P.M., Monday through Saturday, and from 2:00 to 10:00 P.M. on Sunday. During all these times there is a trained assistant on hand to aid in answering questions, searching for references, and obtaining books and journals for patrons desiring them. During the day time hours, however, the regular staff composed of professional librarians is on duty. These librarians will endeavor to locate the vaguest references, to compile bibliographies and to aid in solving all problems relating to medical literature.

The chief services rendered by the library are these:

Reference Service: This service is designed to obtain information on any medical subject for the Library's patrons. Such service may be requested by mail, telephone or in person.

Inter-Library Loan Service: This service is designed for those patrons who do not live in Birmingham. By means of it any Alabama physician desiring to borrow books or periodicals from the Library may do so.

Photostat Service: This service is offered when the patron wishes to retain permanently for his own records the articles or references he has requested. A photostat is then made of the information desired. There is a small charge for this service, and it can be given only for short articles.

Microfilm Service: The Library will obtain on microfilm those references which it does not have in its possession. These microfilms are requested from larger medical libraries, and may be read on the projector which the Library maintains for this purpose. This service gives Library patrons access to thousands of volumes which the Library does not yet have in its book stock.

The Library consists of approximately 20,000 volumes of books and periodicals. It is composed of the collections received from the University of Alabama School of Medicine at Tuscaloosa, the Jefferson County Medical Society and the Hillman and Jefferson Hospitals. It maintains current subscriptions to nearly 400 journals, both foreign and American. The Library Committee, composed of Dr. Charles M. Goss, Chairman, Dr. Roy R. Kracke, Dean of the Medical College, Dr. Emmett B. Carmichael, Dr. Roger Baker and the Librarian, is planning a fine program of growth and expansion. Many volumes are constantly being added, and it is hoped that the collection will grow rapidly, and thereby increase its usefulness to its patrons.

Soon the Medical College will begin the erection of its new building. When this is completed the Library will be on the first floor where it will be easily accessible. When this development takes place, the Library will have the necessary space to give the utmost in service.

Plans are already being made for a special historical collection of Alabama material to be housed in a separate room of the new Library. In this room, which will be similar to a museum or display salon, will be exhibited in attractive cabinets and glass display cases all items relating to medicine in Alabama. Here will be found hundreds of interesting objects. There will be portraits

of Alabama physicians. Complete, concise, biographical information will be placed under each portrait. In display cases will be surgical instruments, medical apparatus, medals, diplomas, letters, catalogs, programs and many other data that will present a colorful portrayal of Alabama medical history. Alabama can be very proud of its medical profession, and this collection will serve as a fitting memorial to its members.

This ambitious and worthy effort cannot be realized, however, without the cooperation of all Alabama physicians and their families. It will mean that houses will have to be turned upside down in order to find those precious mementoes that have been carefully packed away, and then perhaps forgotten. It will mean that files will have to be searched to bring to light the old school catalog that father perused so seriously before he left for medical school. It will mean that attics will have to be ransacked to uncover grandfather's stethoscope, or great grandfather's diploma. It will mean that basements will have to be carefully scrutinized to discover the program containing the title of Uncle John's address to the Montgomery County Medical Society in 1885. It will mean parting with cherished scrapbooks, treasured medals and decorations. It will mean giving up beloved keepsakes that are part of one's family traditions; but it will also mean preserving permanently for posterity those records which belong to Alabama's medical history. It will mean the recording for all time of those who were makers of this history. Surely the families of physicians both past and present will want this honor for all friends and relatives.

Many interesting items are already being received for this collection. Among these are the library of Dr. H. R. Coston, Dr. Rawls Coston's father, old and interesting saddlebags, several diplomas and registration cards from the old Medical School at Mobile, and the rosewood case containing a set of amputating instruments that belonged to Dr. Charles Hooks Harris, father of Dr. Seale Harris. This case was confiscated in the War Between the States, and later was returned to its rightful owner. The EMDEE, the first yearbook of the University of Alabama School of Medicine at Tuscaloosa, has been presented by Dr. C. P. Hausman. These thoughtful gifts constitute the beginning of

the Alabama Historical Collection, and it is hoped that many others will soon be added.

Each item received is immediately cataloged. A descriptive record of the object, together with its history, the name and biographical information both of its owner and its donor, is attached to it, and this account forms a permanent part of the collection. The Library maintains a gift file in which is listed under the name of the donor all items that he has placed in the Library. The Library also has a beautifully designed book gift plate. This plate bearing the name of the donor is placed in the front of each gift volume. Through these gift files is preserved another historical record of the activities of the Alabama medical profession.

When all these historical items have been acquired, cataloged and permanently added to the collection, and when all the County Medical Societies have placed their historical records and reports here, there will be assembled in one place the material necessary to complete the medical history of Alabama.

This history which has been a long-felt need may soon be a realization. Alabama should have its record to add to the volumes which compose the history of medicine in America.

The physicians of Alabama, by their cooperation with the Medical College of Alabama Library, will be the effective means for the achievement of these important ideals.

COMMITTEE CONTRIBUTIONS

PHYSICIAN-DRUGGIST RELATIONSHIPS

PRESCRIBING NARCOTICS BY TELEPHONE

R. E. Cloud, M. D., Chairman
Ensley, Alabama

The telephone is a great convenience to the doctor, the druggist and the patient. It has its limitations, however, as we all know, and doctoring by telephone may easily go too far. The working diagnosis under such circumstances must be based on the history and symptoms told to the doctor and it would be unwise for him not to make it clear that he accepts no responsibility for its correctness.

Aside from the question of responsibility, time consumed jotting down names, addresses and looking up telephone numbers, prescribing may entail ordering a narcotic. This is, of course, illegal as the law plainly prohibits the druggist from dispensing opium and its derivatives except on the written prescription of a doctor. In the past, pharmacists have usually taken telephoned prescriptions of this character. However, the Narcotic Bureau is now increasing its staff of inspectors and in the future more frequent and minute inspections of the druggists' files will be made and, inevitably, prosecutions will result.

This is not simply just something for the druggist alone to worry about. The following

is authoritative: "Telephoning a narcotic prescription is an agreement between doctor and druggist to evade the law—agreement on their part to make illegal transfer of narcotic drugs. By reason of instructing the druggist to furnish narcotics to the patient, the doctor is liable to prosecution for aiding and abetting violation of the law. "It is permissible for the doctor to telephone a narcotic prescription, the written and signed copy to be picked up at the residence when the medicine is delivered."

Most urgent conditions not requiring the doctor's personal attendance may be provided for in advance by cooperation between the family doctor and those he serves—having a few simple medicines in the house, the administration of which may be directed over the telephone.

Ringworm of the Scalp—Ringworm of the scalp is characterized by a loss of luster, loosening, brittleness, breaking off and partial loss of hair in patches, mainly in children under puberty. Epidemic ringworm of the scalp is rarely found in adults, but ring forms on the glabrous skin from lanosum infection frequently occur in adults. The skin infection may occur in adults including the mother as well as other children. In boys the original lesions are most frequent in the occipital region and in areas where the short hair is shingled with the clippers at the back and sides. In girls the original lesions are most frequent where the scalp is most exposed at the whorl just above the occiput or in the part of the hair on top or in the back.—*Murphy, M. Ann. District of Columbia, Feb. '46.*

STATE DEPARTMENT OF HEALTH

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

JANUARY 1946

Examination for diphtheria bacilli and Vincent's	445
Agglutination tests (typhoid, Brill's, undulant fever)	562
Typhoid cultures (blood, feces and urine)	579
Examinations for malaria	459
Examinations for intestinal parasites	1,713
Serologic tests for syphilis (blood and spinal fluid)	46,453
Darkfield examinations	36
Examinations for gonococci	3,454
Examinations for tubercle bacilli	1,674
Examinations for meningococcus	23
Examinations for Negri bodies (microscopic)	105
Water examinations	990
Milk examinations	2,039
Miscellaneous	445
Total	58,977

BUREAU OF PREVENTABLE DISEASES

D. G. Gill, M. D., Director

THE STATE'S CANCER CONTROL PROGRAM

RESUME OF ACTIVITIES IN THE FIRST TWO YEARS OF OPERATION

The first specific appropriation for cancer control in Alabama became available by legislative act with the beginning of the 1943-44 fiscal year. Plans had already been laid for the establishment of a few clinics for the diagnosis and treatment of the disease occurring in patients unable to pay for the service in private practice but it was the first of December 1943, however, before the program was inaugurated. It is now possible to report on progress and activities for the first two years of operation.

The establishment of a cancer clinic, particularly during war time, was not an undertaking that could be lightly considered. It demanded not only a location where the basic equipment of hospital facilities, pathological examination, deep x-ray equipment and radium was available but also the services of medical men willing to devote the time to attend the clinic and carry out the treatment whether surgery, x-ray or

radium. The combination of these requirements has limited the number of clinics but at six points clinics have been established. Each of these clinics has a definite meeting time and appointments are made for new patients at the clinic most accessible to them. The clinic is then charged with the direction of the patient and may request his return at any future time.

During the first year (through September 1944), 283 patients were seen by the clinics, of whom 264 were found to have malignancy and were treated. The second year of operation showed a continued growth and a total of 500 new cases were admitted. Treatment in many is a long drawn out procedure, and some of the patients first admitted are still returning for further treatment. It is impossible, therefore, to give any final report on what has been done for these patients. It is interesting to note that fifty per cent of the cases admitted have been cancer of the female generative organs or breast. Twenty-five per cent have been skin cancers and the balance has embraced examples of most types of cancer. Considering, therefore, the patients admitted during the first year of operation but continuing treatment on into the second year, the clinic load was at least one hundred per cent greater during the second year.

This increase is indicated in the financial reports also. Of the \$30,000 appropriated for the initial year, a total of \$28,000 was expended. For the second fiscal year the appropriation was \$50,000 but it was necessary for the Governor to supplement this amount by an additional \$10,000 in order that the work might go on unhindered. With the beginning of the third year the Legislature has made available additional sums to carry on this vital work.

In the financial reports it is evident that hospitalization is the greatest single item of cost, with x-ray and radium running in second place. Surgery, as revealed by operating room and anesthetic costs, was third. It should be remembered that no surgical fees are paid and that the main cost of operative work appears in the days spent in the hos-

pital. An analysis of the figures available gives an average cost per patient of approximately \$85.00 but many of the patients need further care so that this item will probably increase.

Patients have been admitted free from every county in the State, indicating widespread need for the service. At the present time follow-up is being instituted to determine the outcome of patients treated and the disposition of patients approved for admission but failing to meet their appointments. Referral of cases has, in many instances, been entirely too late as far advanced, hopeless cases have come in only to be sent back home as untreatable. Most of the responsibility rests on the patient as he has delayed visiting a doctor until beyond treatment. The Field Army of the American Cancer Society is doing an excellent job in the education of the public but to complete the program the medical profession must raise its index of suspicion so that early lesions may be found at a stage that is amenable to treatment.

The physicians who have served and are serving on the staffs of the various clinics are to be congratulated for making possible the progress that has been achieved. It is hoped that additional men, now returning from the service, will take up their share of the load and permit the full possibilities of the program to be consummated.

Massive Arsenotherapy of Early Syphilis—(1)

It is obvious from the review of the various treatments that the short-term intensive arsenotherapy of syphilis is too hazardous for general use and should be used only in hospitals or treatment centers which have well-trained personnel.

(2) The safer, long-term methods of intensive arsenotherapy, such as the Eagle tri-weekly methods, the Army twenty-six-weeks' plan, or the thirty-day injection system can be recommended for general use. The results of treatment are satisfactory with all these methods, and they can be used on an ambulatory basis.

(3) The routine conservative continuous schedule of 30-0-60 for early syphilis will probably soon be used only in the minority.

(4) The addition of bismuth or fever to mapharsen yields better results than mapharsen alone.

(5) Fever enhances the toxicity of mapharsen and therefore must be used with caution.

(6) Quantitative serologic tests are essential to the proper management of intensive therapy.—*Rodin, J. Indiana M. A., March '46.*

CURRENT MORBIDITY STATISTICS

	Dec. 1945	Jan. 1946	E. E.* Jan.
Typhoid	7	1	6
Typhus	50	33	22
Malaria	117	97	75
Smallpox	2	2	2
Measles	13	55	218
Scarlet fever	119	55	101
Whooping cough	81	84	118
Diphtheria	69	21	46
Influenza	3778	7278	1676
Mumps	69	105	123
Poliomyelitis	8	1	3
Encephalitis	1	0	1
Chickenpox	86	132	240
Tetanus	2	4	3
Tuberculosis	253	184	209
Pellagra	3	1	10
Meningitis	19	21	19
Pneumonia	465	508	684
Syphilis	1086	781	1042
Chancroid	12	8	10
Gonorrhea	965	899	395
Ophthalmia	0	0	1
Trachoma	0	0	0
Tularemia	1	0	2
Undulant fever	6	3	2
Dengue	0	0	0
Amebic dysentery	4	3	0
Cancer	224	214	0
Rabies—Human cases	0	0	0
Positive animal heads	62	45	

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF SANITATION

T. H. Milford, M. S., in S. E., Director

THE MILK PLANT FLOORS, WALLS AND CEILINGS

Contributed by

U. D. Franklin, B. S., M. S.

Principal Sanitarian

Next to planning the general layout of a milk plant, the selection of materials and finishes for floors, walls and ceilings is of major importance. Page 83 of the 1939 edition of the Milk Ordinance and Code recommended by the U. S. Public Health Service states that "the floors of all rooms in which milk or milk products are handled or stored or in which milk utensils are washed shall be constructed of concrete or other equally impervious and easily cleaned material and shall be smooth, properly drained, provided with trapped drains and kept clean."

A good milk plant floor should meet the following requirements:

1. It should form a continuous smooth surface with no depressions in which water will pool.

2. It should have sufficient slope for ready drainage.

3. It should be impervious to water, washing or soaker solutions, milk wastes and fats.

4. It should be easy to clean.

5. It should be safe to work on.

6. It should be sufficiently strong to withstand heavy loads and traffic.

A variety of approved floor materials are available. Those used most are concrete, light tile, floor brick, steel or iron floor plates and grids. Concrete furnishes maximum utility at reasonable cost. Therefore, it is used most often as a flooring material, especially in the smaller plants.

Concrete floor construction may be of two types. The monolithic type consists of forming the wearing course directly on the freshly poured base slabs by tamping. There should be no free moisture after tamping. The second type consists of adding the wearing course after the base slab has hardened, usually about a week after the slab is poured. The slab should be kept wet during most of this period.

The base slab should contain reinforcing material. The wearing course should have a thickness of at least one inch and be as dense as possible. A 1-1-2 cement, sand, and coarse aggregate mixture seems to be favored for the wearing course. The amount of water should be limited to about five gallons per sack of cement.

Trapped drains should be installed at the points where most waste or wash water will be emptied. Sufficient floor drains enable keeping the floors relatively dry and clean during operation, and reduce labor and water required during clean up.

In connection with the construction of walls and ceilings, page 84 of the Ordinance and Code referred to above states "walls and ceilings of rooms in which milk or milk products are handled or stored or in which milk utensils are washed shall have a smooth, washable, light-colored surface, and shall be kept clean."

Several types of wall construction may be used in milk plants. To some extent, these will influence the inside finish. Where wood is used for the exterior, the interior finish is usually plaster, wood, or sheet metal. Where the outside walls are built of brick, hollow tile, glass block, or stone, a finish on the interior with tile or glazed brick is preferred to that of plaster or painted wood walls. Tile or glazed brick may be used to a

height of three or four feet, with the portion of the wall above this cement plaster. This reduces construction costs.

Low ceilings are more conducive to condensation than high ceilings, and frequently prevent proper installation of coolers. Therefore, it is best to have a minimum ceiling height of twelve feet. The ceilings are usually constructed of wood, metal, or other suitable material. They should be painted with a white or light-colored paint.

Finally, all rooms should be well lighted and ventilated. The reason is obvious. Ample light promotes cleanliness which in turn means quality. Ample light openings also increase ventilation, which is a very important factor in milk plants, especially in the summer. Window openings equivalent to at least 10% of the floor area, and preferably 20% should be provided for all work rooms. The windows should extend as high as practicable to aid in spreading the light to all portions of the room. Unless suction fans for forced air circulation are provided, the windows should be of a type which permits opening of the top portion. Ceiling ventilators, especially at points where steam and vapors are likely to escape, such as near pasteurization vats and bottle and can washers, materially improve ventilation.

Section 12 of the Ordinance and Code to which reference has been made requires that "properly prepared plans for all dairies and milk plants which are hereafter constructed, reconstructed or extensively altered shall be submitted to the health officer for approval before work is begun." The Alabama State Board of Health Regulations Governing the Production, Handling and Sale of Milk and Certain Milk Products require, in addition to the above, that "in the case of milk plants signed approval from the State Health Officer shall be obtained before work is begun." County sanitarians and milk inspectors should keep in close contact with the dairy industry in order to advise those members who are contemplating remodelling or construction regarding proper materials and satisfactory construction. Such advice, given before the blue print stage of the plans is reached, will materially decrease the number of changes in plans that may have to be made before formal approval can be given.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL MORTALITY STATISTICS

REPORTED BIRTHS, STILLBIRTHS, DEATHS FROM
CERTAIN IMPORTANT CAUSES AND RATES*—

DECEMBER 1945, 1944, 1943

Births, Stillbirths, and Causes of Death	Number of Deaths Registered— December 1945			Rate (Annual Basis)		
	White	Colored	Total	1945	1944	1943
Births, exclusive of stillbirths	5940	**	**	24.2	27.4	24.5
Stillbirths	184	**	**	30.0	26.1	30.4
Deaths, exclusive of stillbirths	2569	1467	1102	10.5	10.0	10.2
Infant deaths:						
Under one year	270	135	135	45.5	47.4	45.2
Under one month	168	86	82	28.3	28.6	23.8
Typhoid and paratyphoid 1, 2	1		1	0.4	0.0	0.4
Epidemic cerebrospinal meningitis 6	5	3	2	2.0	0.8	2.0
Scarlet fever 8				0.0	0.4	0.0
Whooping cough 9	3	1	2	1.2	2.4	2.0
Diphtheria 10	13	11	2	5.3	2.8	2.0
Tuberculosis, all forms 13-22	94	36	58	38.2	35.1	35.8
Malaria 28	2	2		0.8	0.4	2.0
Syphilis 30	40	6	34	16.3	15.5	11.8
Influenza 33	92	56	36	37.4	21.6	65.1
Measles 35	1	1		0.4	0.0	1.6
Poliomyelitis 36	1		1	0.4	1.2	0.4
Encephalitis 37	1	1		0.4	0.0	0.0
Typhus fever 39	3	3		1.2	1.2	2.4
Cancer, all forms 45-55	201	137	64	81.8	74.6	64.3
Diabetes mellitus 61	37	28	9	15.1	13.9	10.2
Pellagra 69	12	8	4	4.9	5.7	3.2
Alcoholism 77	2	2		0.8	1.2	0.4
Intracranial lesions 83	263	151	112	107.0	107.3	97.6
Diseases of the heart 90-95	526	370	156	214.0	205.2	189.6
Diseases of the arteries 96-99	35	27	8	14.2	11.8	12.6
Bronchitis 106	4	4		1.6	1.2	2.0
Pneumonia, all forms 107-109	166	75	91	67.5	69.8	94.4
Diarrhea and enteritis (under 2) 119	9	5	4	3.7	5.3	4.5
Diarrhea and enteritis (2 and over) 120	4	2	2	1.6	2.0	0.8
Appendicitis 121	12	6	6	4.9	4.5	5.7
Hernia, intestinal obstruction 122	15	6	9	6.1	5.3	5.7
Cirrhosis of the liver 124	14	11	3	5.7	2.8	6.5
Nephritis, all forms 130-132	164	82	82	66.7	74.6	74.4
Diseases of the puerperal state 140-150	16	7	9	26.1	29.0	40.3
Puerperal septicemia 140, 142a, 147	7	3	4	11.4	10.2	4.8
Suicide 163-164	16	14	2	6.5	2.8	2.4
Homicide 165-168	20	5	15	8.1	12.2	8.1
Accidental deaths (exclusive of motor vehicle) 169, 171-195	139	74	65	56.6	46.9	57.4
Motor vehicle 170	79	60	19	32.1	23.7	19.9
All other known causes	369	211	158	150.1	148.9	138.3
Ill-defined and unknown causes 199-200	210	62	148	85.4	93.8	91.1

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific causes per 100,000 population; from puerperal causes per 10,000 total births.

* Not available.

Sterility—There have been instances wherein the simple sounding of a tight cervix served both diagnostic and therapeutic value in allowing free ingress of sperm hithertofore excluded from the inner channel of the upper generative organs thereby resulting in conception. Some of you have witnessed conception take place after cure of a cervicitis or vaginitis. Still others, normal except for uterine retrodisplacement, become pregnant if the patient rests on the abdomen for 45 minutes after coitus. With some, the refraining from so-called "cleansing douching" will permit pregnancy. To some it may seem unesthetic but experience has demonstrated several individuals thoughtlessly do so thereby decreasing the chance for fertilization.

Many patients have normal bimanual findings and we proceed to ascertain tubal patency by the Rubin insufflation test or one of its modifications, being certain to perform tests shortly after a recent menstrual period to avoid dislodging a recently fertilized ovum. The referred shoulder strap area pain is so classical that the patient is bewildered by its occurrence. Our reader will recall escaping gas from either open Fallopian tube ascends striking the diaphragm when the subject assumes an upright position after inflation. For patients found to have patent tubes this is the climax and new hope springs into the hearts of all parties concerned.

If the tubes are occluded we resort to hysterosalpingography for more detail. Recently your author employs 10 cc. of aqueous diodrast for contrast study instead of lipiodol preparations, without the risk of disturbing complications of oil emboli in cases of troublesome intra-uterine cannula introduction.

All cases are individualized from the start of your investigation and hysterosalpingograph is interpreted in the light of the patient's history and pelvic findings. The placing of her living child in the woman's arms and not the mere fact she became pregnant, possible even in the tube, or miscarried, is the only acceptable result considered satisfactory in sterility. The experience of informed investigators should sober clinicians to refrain from too enthusiastic proposal of surgery in cases of tubal closure.

Perhaps we have concluded the immediate case at hand is anatomically normal yet conception fails to ensue. The judicious administration of thyroid is often all that is necessary. In others estrogen and progesterone injections to create ova of optimum fertility and endometrium of healthy make-up solve the problem.

Some couples seem normal but fail to have issue. Reconciled to their barren state they seek relief by adopting a baby. Soon conception takes place in the foster mother. Maybe the indirect influence of adoption produced rearrangements of the hormones necessary for pregnancy. Perhaps, the psychiatrists can explain.

The reader is reminded of the male factors with the idea that measures consist chiefly in improving general health, eradication of genital infections and endocrine therapy. Tact is imperative in dealing with this factor.—*Scrivner, Illinois M. J., Jan. '46.*

AMERICAN MEDICAL ASSOCIATION NEWS

TREATMENT OF SYPHILIS WITH PENICILLIN SHOWS PROGRESS

REPORTS TELL HOW DRUG HELPED EXPECTANT MOTHERS WITH EARLY INFECTION TO DELIVER NORMAL CHILDREN

A symposium on penicillin treatment of syphilis appears in the March 16 issue of *The Journal of the American Medical Association*. Although the studies are still in progress, a summary of the investigators' findings, so far, follows:

Five Philadelphia doctors recommend that a syphilitic pregnant woman should be treated with either 1,200,000 or 2,400,000 units of penicillin, although the larger dosage is preferred. They advise that the dosage be reduced to one fourth during the first 24 hours to avert the possibility of threatened abortion from shock reaction to the treatment, and that the duration of treatment be prolonged to eight or nine days.

The doctors are: Norman R. Ingraham Jr., John H. Stokes, Herman Beerman, John W. Lentz, and Virgene S. Wammock from the Institute for the Control of Syphilis at the University of Pennsylvania.

Of the 37 syphilitic women treated with penicillin only one syphilitic infant was born. "This success," the authors state, "... indicates a result at least equal to that obtained by the arsenical-bismuth regimen now generally employed in the prevention of congenital syphilis. The treatment may, moreover, be given in a single course over a short period and is apparently curative of the mother's disease at the same time as it prevents transfer from the mother to the fetus."

Although enthusiastic about the action of penicillin, they caution that the "possibility of abortion is a very real threat to some pregnant syphilitic women treated with penicillin."

They conclude with the statement that "this drug represents a distinct advantage in that it is a convenient, safe and effective mode of therapy."

Another group of investigators concerned with the same problem say they "treated 31 mothers, all of whom had early infectious (primary or secondary) syphilis at the time

of treatment, all of whom have now delivered and all infants are apparently normal."

The authors of this report—Mary Stewart Goodwin, M.D., and Joseph Earle Moore, M.D.—are from John Hopkins University, Baltimore.

Drs. Goodwin and Moore say that "no matter what amount of treatment was given to the mother, the results in the infant were substantially worse when the mother had early syphilis during pregnancy than when she had late or latent syphilis. In untreated early syphilis of the mother there was practically no chance of a normal infant unless the maternal infection had occurred within the last few days or weeks of pregnancy. In maternal latent syphilis (usually of several years' duration), 35 per cent of the babies were normal and nonsyphilitic even in the absence of maternal treatment."

Drs. Goodwin and Moore suggest the same dosage and duration of treatment as the other investigators.

"It is recommended," they add, "that in syphilitic pregnant women penicillin be used routinely for the prevention of prenatal syphilis, other methods of treatment being abandoned."

Another report, submitted by Arthur G. Schoch, M.D., and Lee J. Alexander, M.D., of Dallas, Texas, states that "penicillin, properly administered, will cure the majority of patients with primary and secondary syphilis! We base this statement on personal observation of over 900 patients with early syphilis and on intimate knowledge of results obtained by other investigators."

Drs. Schoch and Alexander say that the "curability of syphilis depends on (1) total dosage, (2) injection interval, (3) duration of treatment days and (4) addition of other antisypilitic drugs."

They recommend 2,400,000 units of penicillin in seven and one-half days (40,000 units injected into the muscles every three hours day and night). Furthermore, they state that patients with early syphilis have been more successfully treated when more than one drug was utilized. Their recent experience indicates that the addition of mapharsen or bismuth to a course of penicil-

lin probably cures more patients with early syphilis than if penicillin is used alone.

A report also appears from the Dermatology and Syphilology section of the Mayo Clinic which deals with a two year study of penicillin's action on 100 patients with various types of syphilitic involvement of the nervous system.

Three physicians—Paul A. O'Leary, Louis A. Brunsting and Orville Ockuly—from Rochester, Minn., state that penicillin given in combination with fever therapy, either malarial or by means of the fever machine, did not improve the results noted from fever treatment alone.

Comparing the two they say:

"The clinical improvement that was noted by some patients following penicillin therapy was of a vague type, which can be summarized by the general statement of the patient 'I feel better.' On attempting to analyze this, it was not possible to elicit any constant changes in the group as a whole, although gain of weight and slight decrease of pains in the legs were the outstanding results. The crisp type of improvement that occurs following malarial therapy was not observed in the group which received only penicillin. Increasing the dose to 8,000,000 units (from 1,200,000) did not increase the degree of improvement, nor has the administration of three courses of penicillin of 2,400,000 units each, given at two month intervals, been of additional help in this regard. We have been impressed with the fact that improvement following administration of penicillin comes within two or three months after treatment, while improvement following malarial therapy may not be fully manifested for two or three years thereafter."

The doctors' study reveals that patients who had meningeal neurosyphilis derived the greatest benefit from penicillin treatment, while patients with early dementia paralytica were helped only slightly if at all.

The authors say, however, that the "period of observation is still too short to justify any attempt to make conclusive deductions as to the merit of penicillin in the treatment of neurosyphilitic patients. In fact it is well not to draw conclusions as to the success or failure of any method of treating neurosyphilis until a minimum of three years and

preferably five years has elapsed since the treatment was started."

MALARIA "BLOCKBUSTER" IN WAR ON NEUROSYPHILIS

Malaria is being used as a "blockbuster" in the war on syphilis of the brain and spinal cord, according to an article appearing in the current issue of *Hygeia*, health magazine of the American Medical Association.

The authors, Lieut. Col. Hilton S. Read, Major Frederic T. Becker, and Capt. Lawrence I. Kaplan, Medical Corps, A. U. S., who are on the staff of the Army's Finney General Hospital in Georgia, write that even early syphilis treatment is no guarantee against neurosyphilis.

"Four years after the appearance of the primary sore, 30 to 50 per cent of infected cases may develop neurosyphilis, the most stubborn form of the disease. Why spirochetes choose to attack the brain and spinal cord is still undetermined. One theory suggests that inadequate, interrupted or inefficient treatment increases the chance of involvement of the nervous system; however, the development of neurosyphilis may follow even excellent treatment."

Artificially induced malaria treatment was first tried on a large scale in 1917. Since that time, it has become a widely used method of therapy.

Continuing they say:

"In 97 per cent of neurosyphilitic patients to whom malaria is administered early in the disease, arrest is possible before the crippling of minds and nerves takes place. Fever alone does not seem to be the answer. The thermal death point of the spirochete is 114 F., a temperature no human being could survive. The mystic seat of body immunity—a group of cells in the liver, spleen, lymph glands and bone marrow—may eventually provide the explanation for the beneficial action of malaria. Research experts, like Mark F. Boyd, M. D., of the Rockefeller Foundation, believe that after the bite of the malaria-infected mosquito, the malaria parasites rendezvous in these cells. The blood of a person who has been bitten by an infected mosquito may be safely used for transfusions several days after the bite without danger of transmitting malaria to the recipient. In other words, the malaria parasite has retired to some unknown retreat."

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BACKGROUND

OVER THREE DECADES OF CLINICAL EXPERIENCE

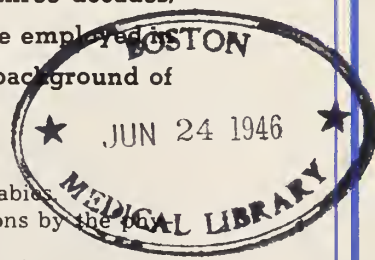
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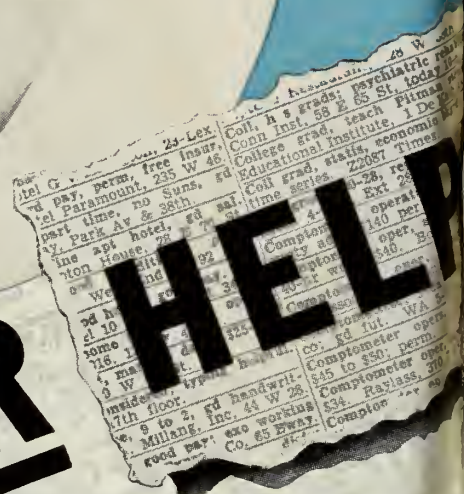
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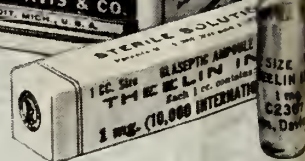
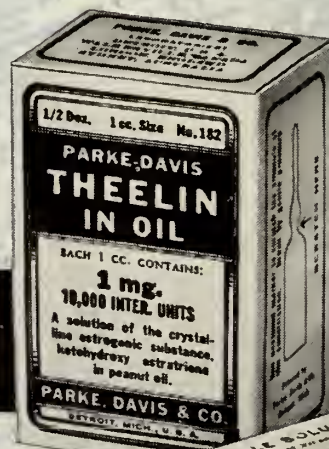




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THE RECOGNITION, EVALUATION AND MANAGEMENT OF HEART DISEASE IN PREGNANCY

LOUIS L. FRIEDMAN, M. D.

And

JAMES R. GARBER, M. D.
Birmingham, Alabama

Pregnancy complicating heart disease has for many years been recognized as one of the most difficult and controversial problems arising in the practice of medicine. Physicians have consequently accorded it a position of awesome respect. The very nature of the problem transcends the field of scientific medicine and requires, in addition, a careful evaluation of each individual case on the basis of social, economic and religious considerations. Fortunately, the internist and the obstetrician have recognized this difficult situation as one of mutual interest and concern. As a result of this unified effort, real progress has been made in the very recent past and if continued in the future, will eventually reduce the incidence of tragic complications in the pregnant cardiac to a minimum. They have learned from experience that only complete and unprejudiced cooperation in the evaluation and management of each case will yield consistently satisfactory results once the diagnosis of heart disease is either suspected or established in a female of child-bearing age.

The very fact that one thousand or more maternal cardiac deaths in this country each year are intimately associated with pregnancy is sufficient reason to establish the importance of this problem and view it with

some concern. (22,35a) Stander has found that the maternal death rate in pregnant cardiac females ranks fourth on the list of causes of maternal deaths associated with pregnancy. (35a) Various authors estimate that between 4 and 8% of all pregnant females complain of signs and symptoms referable to the heart sometime during their pregnancy, (33,42) but after careful examination and critical evaluation only about 50% of these cases can be classified as actual organic heart disease. The remainder are usually found to be suffering from neuro-circulatory asthenia or some functional affair. (42) Estimates on the actual incidence of heart disease in pregnancy vary from .4 to 3.5%. (1,13,23,27b,33,35a,35b,41,42) These small statistical differences are not easily explained, but are probably related to and influenced by a combination of factors, such as the incidence of rheumatic heart disease in the geographic locality studied, the socioeconomic status of the class of patient investigated, and the quality of the medical talent which determined the diagnosis of heart disease. In all likelihood, the element of missed diagnoses can be discarded as it is probably quite constant in all areas.

It is an established fact that 90 to 95% of heart disease in pregnancy is rheumatic in origin. (1,6,13,18,23,37,38) Therefore, for all practical purposes the consideration of heart disease in pregnancy is narrowed down to a study of this one entity. This is especially true when one considers the fact that this disease manifests itself with greatest fre-

Read at the Postgraduate Seminar on Obstetrics and Gynecology conducted by the Medical College of Alabama, January 22-25, 1946.

Assistant Professor of Medicine and Professor of Obstetrics, respectively, Medical College of Alabama.

quency during the childbearing years. Mitral stenosis is the most important lesion to be considered as it occurs by itself or in combination with other valvular defects in 68 to 95% of the cases of rheumatic heart disease in pregnancy. (1,12,17,23,24) This valvular lesion is important not so much because of its unusual frequency, but rather because it precedes the development of more serious complications of heart disease in pregnant females. (10,35a) Three per cent of those females who have mitral stenosis develop auricular fibrillation during pregnancy and about another 20% develop congestive heart failure. (1,6,13,22) Mitral insufficiency, on the other hand, can be viewed with considerable optimism when it is discovered. In the absence of any other demonstrable cardiac damage, it is relatively insignificant and a favorable outcome may be anticipated if a pregnancy supervenes. (6,25) Congenital heart disease, hypertensive heart disease, luetic heart disease, thyrotoxic heart disease, coronary artery disease, subacute bacterial endocarditis and a few other rare conditions comprise the other 5 to 10% of heart disease in pregnancy. (42) For the most part, the members of this group can be disregarded because of their rare occurrence. Congenital heart disease is of prognostic significance only in the presence of coarctation of the aorta or when there is a communication between the right and left side of the heart or between the aorta and the pulmonary artery. (1) However, one need not be concerned with congenital heart disease as the serious cases usually succumb before puberty. (28a) The other members of this group with the exception of subacute bacterial endocarditis usually manifest themselves after the childbearing years. Pregnancy in itself is not responsible for any specific heart disease during the actual period of gestation and those few cardiac deaths which are recorded in the literature as occurring without any previous evidence of cardiac involvement are today thought to be merely examples of previously unrecognized heart disease. In recent years an entity known as postpartal myocarditis has been recognized with ever-increasing frequency. (14,21,33) All available information on the subject seems to justify the prevailing clinical impression that pregnancy is directly responsible, and

it occurs with sufficient frequency in relation to a recent pregnancy that the accusation is probably correct. Clinically, the disease is characterized by a combination of any or all of the following important signs and symptoms: hypertension, cardiac failure, cardiac enlargement, small pulse volume, anasarca, gallop rhythm and systolic apical murmurs. (21) However, since it occurs one or more months after delivery and because time does not permit a more detailed discussion of this disease, it is mentioned only, in passing, to be complete.

In order to understand the problem of heart disease associated with pregnancy and to distinguish correctly between organic and functional heart disease, it is necessary to appreciate the normal physiologic and anatomic cardiac changes which take place in the maternal organism during gestation. The circulating blood volume is increased 20 to 25% (11) and cardiac output, which is a reliable measure of cardiac work, undergoes a 50% increase from the beginning of the second trimester of pregnancy until the ninth lunar month. (3,4,36) This increase in cardiac work is directly proportional to the incidence of cardiac decompensation in the pregnant female suffering from chronic heart disease. (6,7) Consequently, we observe an increasing frequency of cardiac failure from the beginning of the fourth to the end of the ninth lunar month. (6) The time at which failure occurs is related to the amount of cardiac reserve with which a patient enters upon a pregnancy and those with the least reserve fail earlier and offer a very poor prognosis. (1,38) Cardiac failure which occurs during the first trimester of pregnancy is only coincidental with the pregnant state and not the result of it. (26) During the tenth lunar month there is a marked decrease in the cardiac output and in this period there is a corresponding decrease in the incidence of heart failure. (6,7, 13,27b) Similarly, it has been observed that if there is no previous history of cardiac decompensation, heart failure rarely occurs during delivery or immediately thereafter. (1,6) Most authorities agree that the heart undergoes some hypertrophy during pregnancy. (22,33,35a,42) As the pregnant uterus enlarges and exerts pressure on the diaphragm from below the heart is moved upward and laterally. (26) Evidence of these

changes may be found in the electrocardiograph which often shows axis deviation and in addition a Q wave and an inverted T wave in Lead III, but these variations are the result of the temporary physiologic and anatomic differences in the heart during pregnancy and are of no clinical importance. (20) As a further result of changes in the heart during a normal pregnancy, systolic murmurs may be heard over any of the valvular areas, but if no previous heart disease has been recognized before the intervention of pregnancy, they can be considered as normal physiologic functional variations and disregarded. (6) A diastolic murmur must be viewed with more concern as it is not a normal finding under any circumstances. The maternal organism who enters pregnancy with a normal heart is able to compensate for these changes and proceeds to an uneventful delivery. (10) However, when pregnancy occurs in a female with a previously diseased heart, the outcome is not always so uneventful and maternal and fetal death result with alarming frequency. (25,42)

In 1920, twelve per cent of pregnancies occurring in cardiac patients terminated fatally. (18) Since then remarkable progress has been made in the understanding, evaluation and management of heart disease in pregnancy and various authors report maternal death rates varying between 2.5 and 8.7%. (17,18,19,22,25,29,31a,32,35b,40) Hamilton gives a low figure of 2.6% for his last 500 cases. However, these figures are probably misleading as they do not reflect the fact that the other complications of pregnancy, such as embolism, sepsis, pneumonia and nephritis, are handled very poorly by the cardiac and terminate fatally with increased frequency in these patients. (38) Therefore, it is necessary to evaluate these statistics with some reservation. One may seriously question whether the difference in the reported maternal death rate is an index of diagnostic and therapeutic efficiency or rather a reflection of a basic difference in the type of cases used to compile these figures. The fetal death rate in pregnant cardiac patients has remained relatively constant during the same period of time. The overall fetal death rate is still about 10 to 18%, (10,30,35b,40) but even

this high figure does not reflect the fact that in those pregnant females who suffer from more severe heart disease the prognosis for a live child is even gloomier as in those instances the fetal death rate approaches 45%. (10)

Nevertheless, real progress has been made in lowering the maternal death rate. This advance is attributable to our better understanding of cardiac physiology coupled with a more competent clinical appraisal on an individual basis of each pregnant cardiac. In addition, closer cooperation between the obstetrician and the internist has resulted in greater therapeutic benefits for the pregnant female with heart disease. Unfortunately, no one test or group of laboratory or clinical tests have been developed which are of genuine assistance to the obstetrician and internist in evaluating the cardiac status in pregnant females with heart disease. The usual exercise tolerance tests are thoroughly unreliable in establishing a prognosis or in helping to determine the nature of the advice to be given to the cardiac female who wants to bear a child and raise a family. (18) Venous pressure and vital capacity measurements are likewise of no benefit in attempting to evaluate the cardiac status in pregnant females suffering from heart disease. (27b,39) Consequently, the obstetrician and the internist have been thrown back on their own clinical ability and experience in evaluating the cardiac status of those patients in whom the diagnosis of heart disease is either suspected or established. Here again, the problem is complicated by the fact that the usual clinical signs and symptoms are not as generally reliable in pregnant females because of the physiological changes of pregnancy previously mentioned. However, great assistance may be obtained from the intelligent utilization of the "*Functional Classification of Heart Diseases*" as prepared by the New York Heart Association. (27b) This clinical evaluation of cardiac function is classified as follows:

Class 1. Patient with cardiac disorder without limitation of physical activity. Ordinary physical activity causes no discomfort. The patient does not have symptoms of cardiac insufficiency nor does she experience anginal pain.

Class 2. Patient with cardiac disorder with slight limitation of physical activity. They are comfortable at rest but ordinary physical activity causes discomfort, such as undue fatigue, dyspnea, palpitation and anginal pain.

Class 3. Patient with a cardiac disorder with moderate to great limitation of activity. They are comfortable at rest, but less than ordinary physical activity causes discomfort, such as undue fatigue, dyspnea, palpitation and anginal pain.

Class 4. Patient with a cardiac disorder, unable to carry on any physical activity without discomfort. Symptoms of cardiac disease are present even at rest.

Patients in Class 1 rarely encounter difficulty during their pregnancy and patients in Class 2 likewise usually do well if properly supervised. (2,27b,38) However, increasing difficulty is encountered in Class 3 and Class 4 so that in either case intervention may be necessary because of impending or actual cardiac decompensation, and a fatal outcome may result. (38) This is a very simple and complete classification which, if properly applied in individual cases, will be an adequate guide to proper evaluation and therapeutic management of the pregnant cardiac female. It is very practical in its application and does not require any expensive laboratory equipment or tedious examinations in order to be applied to the individual cardiac female who seeks to become pregnant, or who is already pregnant. Furthermore, it supplies the best available criteria for prognosis. (27b,34) As a general rule, authorities are agreed on one point that those mothers who are suffering from congestive failure or auricular fibrillation, or who have suffered from either or both in the past, must never be permitted to become pregnant. (25,26,35a,42) This same admonition is to be heeded in cases of marked aortic regurgitation and hypertension, (25,42) Should a pregnancy develop in such a situation, and if existing conditions permit, a therapeutic abortion should be contemplated and undertaken as a lifesaving measure for the mother. Reliable statistics and past clinical experience have shown that even if these patients enter pregnancy in a compensated state, decompensation and fatal outcomes result with alarming regularity as they are unable to withstand the added

cardiac burden. Nevertheless, it is equally true that on occasion the cardiac female who enters pregnancy with a very favorable prognosis sometimes meets with unexpected tragedy. On the other hand, some cardiacs who become pregnant against the advice of their physician, and for all practical purposes have no chance of surviving the pregnancy or delivering a live fetus, will frequently experience an uneventful period of gestation and deliver a healthy and normal child. (26)

Dyspnea, color and basal rales in the lungs are the most reliable and dependable clinical aids in recognizing early decompensation in the pregnant female. (22,25,26,30) At the first sign of dyspnea or slight cyanosis, the patient must be considered as a decompensated cardiac. However, one must remember that even dyspnea may be more imaginary than real in the nervous pregnant female. Rales in the base of the lungs early in pregnancy are also very significant, but later in pregnancy must not be mistaken for atelectatic rales which result from diaphragmatic elevation because of uterine enlargement and pressure. Although dependent edema is usually a reliable sign of cardiac decompensation in the non-pregnant individual, late in gestation it may be the result of uterine pressure on the pelvic veins and it thus must be considered with some reservation in evaluating the cardiac status on a clinical basis. (25) Hepatic enlargement is also difficult to judge when the enlarged uterus practically fills the abdominal cavity and pushes the liver up. (26). Similar difficulty may be encountered in judging heart size because of the normal upward and lateral displacement of the heart in pregnancy. MacKenzie has found that mild engorgement of the neck veins is likewise unreliable as it occurs in normal pregnancy. (35a). The patient and the family must be cautioned to watch for, and to report to the physician, dyspnea, cough, palpitation, and hemoptysis as soon as any or all of these symptoms manifest themselves. If an intercurrent infection supervenes, the patient requires extra vigilance as it frequently heralds the onset of cardiac decompensation, for which it is frequently the responsible agent. (1,10,25,30)

Having become familiar with the foregoing facts and figures, we are better able

to evaluate each case and arrive at a reliable prognosis. However, when we offer our advice to the cardiac patient who wishes to bear children, we pass rapidly from the realm of scientific facts and acceptable clinical observations and begin to deal with the unstable element of human emotion. After a careful evaluation of a cardiac female who wishes to become pregnant and seeks advice on the matter, the internist and obstetrician may find that pregnancy will act as a hazard to the continued good health of the patient or even terminate fatally. This decision must be transmitted emphatically and forcefully to the patient and the patient's family, and the physician must be prepared to defend his evaluation in an unyielding fashion. Under no circumstances should a pregnancy be advised or permitted in a patient who is suffering from congestive heart failure, auricular fibrillation, hypertension or marked aortic regurgitation. (26, 42) Even a history of congestive heart failure or auricular fibrillation in the past is sufficient to interdict pregnancy. (42) The authors do not subscribe to the extreme view that no cardiac should be permitted to become pregnant nor to the unproved assertion that childbearing has no influence on the life span of a cardiac. (12) We are in agreement with the unproved clinical impression of some excellent cardiologists and obstetricians that pregnancy in a cardiac female tends to shorten her already abbreviated life because the added strain of childbearing accelerates the depreciation of cardiac reserve. (10, 26, 35b, 38, 42) Lamb has observed that more than one-half of the patients are definitely worse after pregnancy. (24) This, plus the fact that rheumatic fever is more frequent in the offspring of rheumatic parents, should also be considered by the physician and the cardiac who wishes to bear children and raise a family. (25) In evaluating the problem on a long term basis, it is necessary to consider the fact that even after a successful delivery, the rearing of the child is an added burden which may further tax the cardiac reserve. (38) Females with heart disease give birth to rather weak children as a rule.

When the foregoing observations apply in an individual case, it is a relatively simple matter for the physician to arrive at his final decision. However, not all cases are so clear

cut and then the physician must yield to a consideration of such factors as a patient's religion, economic status and an overwhelming desire to raise a family. If the prognosis is not too bad and no unalterable contraindications of pregnancy exist, then the physician may permit a pregnancy to occur if all the hazards are explained to the patient and the family in detail. Because of strong religious sentiment and a desire to have a family, the patient may decide to hazard a chance even after the physician has advised against it. Many of those seemingly unfavorable cases terminate without incident under adequate and acceptable prenatal care. (42) Since rheumatic heart disease is a progressive affair, it is the responsibility of the physician to advise one or even two pregnancies early in the life of a cardiac female so that the heart will have a better chance of withstanding the added load of pregnancy. Therefore, if the patient is a borderline case, or beyond, who absolutely insists upon becoming pregnant, one or even two or three properly spaced pregnancies early in life may be advised, but after that some appropriate measure must be taken to prevent future pregnancies because cardiac reserve does diminish with advancing age. (2, 12, 25) Pregnancy should never be advised in the cardiac female past the age of 30 because of the increased frequency of congestive heart failure. (1, 9, 13, 30) This observation regarding age is so constant that many authors believe that it is in itself one of the most reliable of all prognostic criteria. (13, 17) We must remember that favorable results can be anticipated only under proper management and follow-up of the pregnant cardiac.

If a female with chronic heart disease becomes pregnant, certain extra precautionary measures must be taken during pregnancy. (19). For one thing, she must take longer rest periods during the day than the normal pregnant female. The length of these rest periods must increase as pregnancy progresses. (26) She must be advised to give up a certain amount of her house work and never to become fatigued. For example, she must not be permitted to do her own wash or scrub the floors of her house. Her diet may be of the usual variety but salt-poor, and excessive weight gain should not be permitted. She must guard herself

carefully against any intercurrent infection, and should one occur, it is mandatory that she immediately report the same to her physician who is then obliged to treat the illness energetically and enthusiastically without delay. (25) Sexual intercourse should be avoided. (1) Above all, there must be a complete understanding and wholehearted cooperation between the physician, the patient and her family. Finally, provision must be made well in advance of the expected date of delivery for hospitalization of the patient and adequate nursing care. No cardiac should be delivered at home except in rare emergencies. Many unfavorable and borderline cases, if properly handled, will terminate uneventfully. (23,26,38) However, no matter how favorable the prognosis in some cardiac females, they may decompensate during their pregnancy. (1,26)

If decompensation occurs during the first trimester of pregnancy it usually portends ominous results. Therefore, following the reestablishment of cardiac compensation by the usual means, a therapeutic abortion should be advised and performed as it is a relatively innocuous undertaking at this time. (1,8,10,19,25,26,31b,35a,38) Should the use of an anesthetic agent become necessary, then it is safe to employ ether, ethylene or local anesthesia, alone or in combination, depending on the individual preference. (1,8,10,23,25,40) Spinal anesthesia is not a safe procedure and is not recommended. (16) Caudal analgesia is probably a very safe procedure in these patients, but needs careful study and evaluation. At this point, it is probably correct to mention the fact that neither digitalis nor quinidine administered to the mother in full therapeutic dosage is injurious to the fetus. (42) When decompensation occurs after the third or fourth month, it is unwise to contemplate or to undertake evacuation of the uterus as the risks involved far outweigh the expected therapeutic benefits. (1,10,30,42) This patient should be treated as an ordinary cardiac with digitalis, diuretics, bed rest and other acceptable therapeutic measures. The fact that she is pregnant should be of secondary importance only. (38) The physician must concentrate solely upon the cardiac condition when treating this patient and temporarily disregard the welfare of the fetus until compensation is reestablished. It may

be necessary to keep the patient at complete bed rest for an unusually long period of time in order to maintain cardiac compensation after it is accomplished, but, even so, complete bed rest for months or even the duration of pregnancy is preferable to therapeutic interruption after the first trimester. (13,30,35a) There is ample evidence that prolonged hospitalization and bed rest favorably influence the outcome in these patients. (35a) The more serious cases of failure should be readmitted to the hospital for observation and complete bed rest about two weeks before the expected date of delivery. As the patient approaches term, spontaneous improvement in the heart condition may be expected. (27b) On the other hand, no dramatic therapeutic advantages are to be gained from evacuation of the uterus as it does not immediately decrease the cardiac load, and there is evidence to suggest that it actually precipitates death on occasion. (19) On rare occasions there is no other choice in the matter but interruption and in these cases an unfavorable outcome may be expected with monotonous regularity. (30)

The cardiac patient who is brought to term in a compensated fashion may be permitted to deliver from below if there are no obstetrical contraindications. (8,13) However, the conduct of labor must be very carefully supervised as disaster may overtake the pregnant cardiac with startling rapidity. During the first stage of labor, frequent observations should be made of the pulse rate and respiratory rate. If the pulse rate exceeds 110 or the respiratory rate 24 per minute, Mendelson and Pardee have observed that in these instances the attending physician may expect a very high incidence of cardiac complications either before, during or after delivery. (28b) If the pulse and respiratory rate remain within these critical limits, cardiac failure never occurs. (28b) Should these ominous signs manifest themselves in the course of the first stage of labor, rapid digitalization is indicated as an emergency procedure. Morphine and barbiturates may be employed liberally and to advantage in this stage of labor, but the use of hyoscine or more than very small doses of scopolamine is contraindicated. (8,23,) The second stage of labor should be accelerated by means of low forceps, episiotomy

or some other suitable procedure depending upon the dictates of the existing circumstances. (1,8,23,26,35a,38) The experience with cesarean section is also very satisfactory, especially if the operator and the anesthetist are competent. (42) It is probably the procedure of choice if sterilization has been decided upon in advance. In spite of the favorable results obtained with cesarean section, more and more authorities recommend that delivery be from below because the results are equally as good or better in the well managed cardiac who can be carried to term. (2,8,13,15, 18,19,25,27b) After delivery, the patient requires even more careful watching as 75% of the deaths occur during the puerperium and with greatest frequency during the first twenty-four hours following delivery. (22, 38) Liberal use of oxygen is indicated during this period on the slightest indication. In addition to the other cardiac measures, phlebotomy should be restored to if failure is acute. Intravenous fluids should be avoided during the first twenty-four hours or longer as they are dangerous in any cardiac patient at any time.

We have attempted to present an impartial brief review of the problems of heart disease in pregnancy. Although our knowledge of this subject is still admittedly deficient in many respects we have nevertheless succeeded in significantly reducing the maternal death rate by an intelligent application of those facts and proved clinical observations and procedures which are presently available to us. It is most important to interpret all findings in patients suspected of having organic heart disease in the light of the normal physiologic and anatomic changes in the pregnant maternal organism. Then we will stand less chance of erroneously labeling a patient as a cardiac and more chance of establishing a correct diagnosis of heart disease when it is suspected. As a result of this careful examination and critical evaluation many patients will be permitted to become pregnant who otherwise would have been denied that privilege and the lives of many cardiac females will be saved if we are properly forewarned either before or during pregnancy. To insure a successful outcome in pregnant cardiac females the internist and obstetrician must cooperate freely and reach

an intelligent understanding with the patient. It is then possible to accord the patient all of the benefits of modern medical science in the management of her pregnancy and thus facilitate and insure a successful outcome. At no time during the period of gestation should a physician become too optimistic concerning the eventual outcome because even those cases with the most favorable prognosis may suddenly develop heart failure. Therefore, the patient should be seen very frequently and at each office visit the physician must carefully search for any clinical sign or symptom of progressive heart disease in order to recognize congestive heart failure early or prevent it.

SUMMARY

1. The available pertinent literature on the subject of heart disease in pregnancy has been reviewed.
2. Early recognition, correct evaluation and the cooperative efforts of the internist and obstetrician in the management of the pregnant cardiac are essential in order to reduce to a minimum the maternal and fetal death rate.

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THE TREATMENT OF CHEST INJURIES

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This paper is based upon experience gained in a combat hospital in an active theater of war. It is limited to the immediate treatment required by the patient with a chest injury in order that he may be spared a prolonged illness with many operative procedures, and in some cases the life of a "chest cripple." Decortication for organized hemothoraces and radical operations for chronic empyemas will not be discussed. These will be the subject of a future contribution.

Because of the associated injuries, the evaluation of the distress caused by the injured thorax is extremely important. The question always arises as to the injury which is causing the patient the most difficulty, and, as a result, symptoms such as dyspnea, hemoptysis, cyanosis, restlessness and chest pain are carefully noted. Patients with significant chest injuries are restless, short of breath, frequently cyanotic, will give a history of varying degrees of hemoptysis, and are frequently greatly concerned about their lives. Many are in an advanced state of shock. The shock may be due to blood

loss inside the chest, into other injured parts, or externally, or to a combination of these, to disturbed mechanics of respiration, or to a combination of the blood loss and the respiratory disturbance. Thus, after a careful history of the injury, and a diligent physical inspection and examination, the severity of the injury is roughly estimated.

Physical examination of the patient is noted for its errors. Fluid can be detected, shifts in the mediastinum observed and chest wall injuries evaluated but the final estimation of the injury depends upon fluoroscopic or x-ray examination of the chest. In the initial study, I prefer films to fluoroscopy because this gives a permanent record of the patient and a more accurate picture of the condition in the chest. The film should be shot heavy, in that fractured ribs, fluid and blood in the chest, and the amount of air present in the chest, are the main things of interest. The condition of the pulmonary parenchyma is of importance, but this is usually masked by the previously named abnormalities. Foreign bodies which are present, and an idea of

their location, can be more accurately determined by film than by fluoroscopy. Films in both the antero-posterior and lateral positions are required. In obscure conditions, oblique exposures may be necessary. The fluoroscope comes into its own during the course of treatment when the collection of fluid, air or pus becomes small, and accurate localization is necessary. This method of examination is very helpful in the final stages of drying up the chest which has contained fluid.

One of the greatest aids we have in the evaluation of the cause of shock in these patients is the Van Slyke copper sulfate method of determining the specific gravities of whole blood and plasma. This procedure can be performed by an experienced person in less than five minutes, and it will give an accurate estimate of the hemoglobin, hematocrit, and total proteins in the blood, as well as the specific gravities of the whole blood and the blood plasma. The fact that the circulatory system will show changes due to blood loss within thirty (30) minutes of the time of the loss, as indicated by the change in the specific gravities and hematocrit readings, one can feel sure that he can depend on this laboratory procedure. Through frequent use this has established itself as a dependable technic. This method is also of value in following cases where continued bleeding is suspected. Values obtained from this laboratory procedure and the evaluation of the disturbance in the mechanics of respiration will usually establish the cause of the shock present in these patients.

The treatment of the shock associated with such injuries is of paramount importance. Once the cause is determined, vigorous treatment to restore as nearly as possible the normal is important. Early in the use of the Van Slyke method of specific gravity studies it was found that such injuries with traumatic shock needed whole blood for they had a hemo-dilution and a lowered total protein due to blood loss. Only whole blood will correct this. Plasma is started while the cross matching procedure is carried out, but as soon as the whole blood is ready it is given to the patient. The quantity of blood given is sometimes astounding, but it is given until there is a response as indicated by a decrease in the pulse rate or an

increase in the blood pressure. I have come to rely more on the pulse response than on the rise of blood pressure. Many patients must be operated on when the pulse is around 100, and the systolic blood pressure 90 to 100. Frequently blood must be given into two veins at the time in order to get it into the circulation rapidly enough. If there is a marked shift in the mediastinum due to hemopneumothorax, hemothorax or a pneumothorax, an attempt is made to correct this while the blood volume is being restored. Morphine is given in quantities sufficient to control pain. However, the amount given is reduced to a minimum. If neither plasma nor blood is available, isotonic fluids may be given, but it should always be remembered that there is an increase in the capillary permeability, and that the isotonic fluid may further decrease the blood volume by washing out the remaining elements. The anxiety is frequently allayed by simply putting the patient in a semi-sitting position. Inasmuch as some are more comfortable lying flat, the most suitable position for each patient should be determined as occasion arises. All of these measures are carried out to make the patient safe for the surgery which may be necessary. I have seen patients, apparently near death, respond so dramatically that their chest injuries could be treated almost as an elective procedure.

The previously known fact that there is frequently a bronchial constriction produced by a spasm of the bronchial muscles initiated by a neurogenic reflex set up by pain has been elaborated upon by de Takats and others. This was observed in patients with abdominal surgery who had pulmonary embolism, and in patients with injuries to the thorax. They showed that 65% of this could be eliminated by large doses of atropine and papaverine, and suggested that the constriction was due to sympathetic inhibition. Westmark has shown that in 65% of patients with chest wall trauma, and in 85% of those with fractured ribs, there was an associated parenchymatous change. These changes are due to patchy atelectasis produced by bronchial constriction, an increase in the bronchial secretion, and a failure of the cilia of the bronchi to move the secretions from the bronchial tree. Many of the patients exhibiting these findings and

having an associated hemopneumothorax can be controlled by aspirating the chest thereby removing the fluid and air, and by giving them large doses of atropine intravenously. Some surgeons add to this a paravertebral block of the thoracic sympathetic chain. Added to these measures, the intercostal nerves in the vicinity of the injury are blocked with novocaine. At least two nerves above and below the lesion must be blocked in order to control the associated pain completely. This fact is based upon Sherrington's demonstration of metameres in the distribution of the spinal nerves. If considered necessary, oxygen inhalations and aspiration of the bronchial tree through suction are added to the treatment regimen. Patients who are so treated frequently get dramatic relief from their dyspnea, lose the asthmatic and bubbling rales which were present in the chest before treatment was begun, and become comfortable. This type of treatment can be repeated as often as necessary to maintain the patient in a comfortable state. He is kept atropinized as deemed necessary.

Open wounds of the chest are treated by complete debridement, and where there is simply contusion it is treated by hot compresses. If there is a simple rib fracture, this is treated by an attempt at immobilization of the chest by a strip of adhesive around the chest where the diaphragm attaches to the inner sides of the thoracic cage. If there are parenchymatous lesions, this immobilization is not applied. The intercostal nerves at the site of fracture are blocked as described above. If the adhesive strapping does not give relief it should be changed and a many-tailed binder substituted. In "stove-in chest," where there are fractures at multiple sites in the same rib, some form of stabilization to prevent paradoxical breathing is necessary. This can be accomplished by applying towel clips to the ribs affected, pulling them out to their original position, and fixing them in that position. A plaster-of-Paris bandage placed around the chest and constructed on the order of a banjo splint as used in the treatment of fractures of the bones of the hand serves this purpose well. It is always well to keep in mind the more important changes in the lung itself, and always to be on the alert for such changes.

In penetrating wounds of the chest, the points of entrance are debrided and thoroughly cleaned up. Because of the sucking wound produced by the thorough debridement, some advocate a procedure of less magnitude. When adequate anesthesia is available, I see no reason why this wound should not have a thorough job done on it. Fragments of the fractured rib in the course of the penetration should be cut back to smoothness, the rent in the pleura closed, and the wound loosely sutured. No harm is done by leaving the skin and subcutaneous tissue open, and this rarely increases morbidity. When there is doubt about the sterility of the wound, it is good policy to leave these layers open.

The hemopneumothorax associated with the penetrating wound usually is the most important part of the pathology. The degree present determines the amount of dyspnea which the patient has, and its immediate and proper treatment governs the length of time necessary to rehabilitate the patient. This should be treated by immediate aspiration of all the fluid and air possible. If attainable, the chest should be dried up at the first aspiration; but frequently, during the course of the aspiration, the patient will complain of severe dyspnea and pain in the chest and the aspiration will have to be discontinued. The concept that blood in the pleural cavity does not clot will have to be given up. Large quantities of clotted blood is the usual finding in thoracotomies in which hemothoraces are present. Melick and Spooner have recently shown experimentally that blood clots in the pleural space. There is an alteration of the physical appearance, and there is a liquid portion made up of cells and serum which will remain incoagulable indefinitely unless fibrinogen is added. When this is done, this liquid portion will clot. There is also a solid portion made up of cells and fibrin. The pleura does not give off an anticoagulant as was thought. The aspirations must be repeated every 24 hours until there is no fluid left in the pleural cavity. When all of the blood is removed, the color of the fluid will go through the color scale from that of blood to the straw-colored fluid of a pleural exudate. This indicates that the blood in the chest cavity acts as an irritating substance and produces an outpouring of fluid. There

is also a definite inflammatory-like reaction in the pleura in the presence of blood in the pleural cavity, and the fluid and blood act as a plumbage. In so doing they contribute to one of the most frequent sequelae of chest injuries, namely, atelectasis of varying amounts of pulmonary parenchyma. Air replacement is not practiced for there is always a sufficient amount of air left in the pleural space to produce fluid levels which are often depended upon in following cases suspected of continued bleeding. More important than this is the fact that if there is to be a complicating empyema, air replacement would produce a complete empyema on the involved side. Hemorrhage from the lung itself is usually not sufficient to cause trouble. However, the pressure exerted upon bleeding intercostal vessels, which usually cause continued bleeding, is not sufficient to prevent this bleeding and, as a result, this type bleeding must be controlled by surgical ligation. Nerves at the site of the injury are injected as indicated above. This form of treatment usually prevents long morbidity and makes the patient comfortable.

Blood aspirated from the chest may be used for autotransfusion. It is not unusual to withdraw as much as 1500 cc. of blood at the first aspiration. This is collected in a sterile basin, filtered and given directly back to the patient without citrating it as it is the cell-plasma part of the blood in the chest and will not coagulate unless fibrinogen is added. When fresh blood is available, it should be used instead. However, there have been no reactions from this type of transfusion, and where blood is difficult to procure, it is a method of great saving in time for the patient who otherwise would have to depend upon his hemopoietic system to replace this quantity of blood. Blood which has been in the chest for 24-48 hours is not given back to the patient as it might be contaminated.

Foreign bodies producing penetrating wounds are left alone unless they are of large size, or are free in the pleural cavity. When the latter situation is present, the rent in the pleura is enlarged and the foreign body removed. When foreign bodies are in the lung parenchyma and attempts at removal during the acute phase of injury are made, the surgeon courts disaster.

Thoracotomies in acute injuries are complicated by empyemas in approximately 40% of the cases. This is too high to permit surgical gymnastics in acute injuries. If complications due to the presence of foreign bodies in the chest and lung parenchyma develop, the foreign bodies should be removed. Cough, hemoptysis or proximity to large blood vessels or bronchi are indications for removal. The British feel sure that they are still doing surgery for lesions produced by foreign bodies left in chests during World War I. The size of the foreign body determines to some extent the advisability of ever trying to remove it. Some set that size as approximately 1 cm. in diameter, but when the patient is having no symptoms, I should leave such a small foreign body alone.

Subcutaneous emphysema rarely produces anything but an annoyance to the patient. High concentrations of oxygen will increase the rate of absorption, and where it endangers the life of the patient, incisions in the skin can be used to release the entrapped air. Extensive emphysema is usually associated with tracheal or bronchial injuries.

Tension pneumothorax is a rather infrequent finding in chest injuries, but when present it must be recognized and adequately treated. This is usually associated with a bronchiopleural fistula. With the mediastinum shifted markedly to the opposite side of the chest from the side of injury, and where there is not enough fluid or blood in the chest to account for the shift, a tension pneumothorax must be considered. It is due to lacerations, ruptures, or tears in the lung or bronchi of sufficient extent to permit enough air to escape to produce such a change in the respiratory mechanics. The tension pneumothoraces can usually be controlled while the patient is being made ready for the type of surgery to relieve his injury by placing a blunt needle in the second intercostal space anteriorly, and permitting the entrapped air to escape. It is rare to have to resort to a closed intercostal catheter method to control the pneumothorax. The lesion causing this condition will be adequately cared for in the surgical procedure indicated. Intercostal drainage should be instituted in all cases following any surgical procedures on this type case.

Tracheal injuries inside the thoracic cage are extremely rare for these patients usually do not get to the doctor as there are usually enough associated injuries to produce immediate death. The associated injuries are usually to the large vessels in the mediastinum or to the heart itself. The trachea is frequently involved in neck injuries, and in such cases must be adequately treated. Bronchi are frequently injured, and partial resection of the lobe or lobes of the lung to which the involved bronchi carry air should be done. Anything less than this is fraught with numerous postoperative complications.

Through and through chest wounds offer no special problems in their management other than as stated above. Hemothorax, pneumothorax, hemopneumothorax and chest wall injuries in these wounds are treated the same as in penetrating wounds.

Sucking wounds of the chest, unless properly cared for, will certainly be followed by a mortality, provided the opening in the chest wall is of sufficient size to be incompatible with life. Dr. Evarts Graham established a working basis for the size opening in the chest wall which is compatible with life and described in detail the alterations in the mechanics of respiration produced by this type lesion. By definition, this wound is one through which air can be heard to enter and leave the thorax on inspiration and expiration, a hissing sound which is not difficult to recognize. The size of the wound varies, and is usually associated with extensive injuries to the chest wall and to the contents of the thorax. The emergency treatment of this type wound resolves itself into the immediate closure of the wound. This can be accomplished by a ball-valve type of dressing, by a vasoline dressing to the chest wall defect, or it may be a rubber dam type of wound closure. In the final treatment, the majority of these wounds must be treated by thoracotomy. Large foreign bodies are frequently present, and tears and lacerations of the lungs are the rule. Large hemopneumothoraces are present. In the treatment of these injuries, the chest wall is debrided and, if necessary, the rent in the pleura is enlarged to insure adequate exposure of the inside of the thorax, the hemothorax is evacuated by suction, and the ex-

tent of the surgery necessary to repair the damage is estimated. If necessary work cannot be done through the site of injury, there should be no hesitation in closing the wound and making an incision at the site of election. Adequate exposure is necessary. Foreign bodies are removed, parenchymal lesions are cleaned, debrided and sutured. Resection of lung tissue is done if thought necessary, the hemothorax is thoroughly evacuated, and the chest wall closed. An attempt is made to expand the lung completely as the chest wall is closed, by constant suction in the thoracotomy wound as it is closed, and through positive pressure applied by the anesthetist. If the chest wall is already infected, it is unwise to suture it tightly, but suture of the pleura and overlying fascia sufficient to close the wound is necessary. The remainder of the chest wall is left open. There is no advantage in having a dead patient from infection with a beautifully closed chest wall. Some of the wounds are difficult to close because of the extent of the defect in the chest wall, but I have had none which could not be closed, though a muscle flap may, at times, be necessary. Closed intercostal drainage for 48-72 hours must be established and if, at the end of that time, the amount of drainage is small, and no bronchial fistula is present, the catheter can safely be removed. Oxygen, adequate blood replacement, and maintenance of proper fluid balance are important in the immediate postoperative period.

Thoraco-abdominal injuries still carry a very high mortality when compared to other types of chest injuries. Points of entry in or below the 8th intercostal space usually produce more serious abdominal than chest injuries, and should be studied from that point of view. All of the changes produced by the above discussed conditions may be present in addition to serious abdominal injuries. The side of entry has a great bearing on the abdominal injuries sustained. With a point of entrance on the left side, the stomach, the spleen, the splenic flexure of the colon, the body and tail of the pancreas, and the left kidney and adrenal are likely to be injured. From the right side, the liver, right kidney, and the stomach are the most frequently injured viscera. All of these can be explored through a trans-

thoracic approach, and some of these lesions can be more adequately dealt with through this approach. The chest wall is treated as described above, and the rent in the diaphragm is enlarged in a radial direction, a complete exploration is done and all wounds are repaired. Fractures of the dome of the liver can be more adequately cared for through this approach, the spleen can be removed, and more satisfactory exploration of the splenic flexure of the colon can be made with this approach. If there is any doubt about the completeness of the repair of all injuries, the diaphragm should be closed, the toilet of the chest completed, and the chest wall closed, and resort made to an abdominal incision. In closing the diaphragm it is wise to use two rows of non-absorbable sutures, and the second row should be of the mattress type. Drainage from the liver region can be adequately and efficiently established through a stab wound in the flank. Berry has advocated treating the chest wound in all cases where there is a hemopneumothorax, and even a tension pneumothorax, and a suspicious abdominal injury by inserting a large catheter (Levine tube) into the chest through the second or third intercostal space anteriorly and passing it down to the vicinity of the diaphragm. The tube is attached to a Wangenstein type of suction apparatus and continuous suction is applied. In this way, the offending blood and air are removed and the disturbed mechanics of respiration are restored. As the lung expands, it pushes against the tube. As this occurs, the tube in the chest is shortened. It is usually possible to remove the tube completely on the fourth or fifth day. In the meantime the abdominal wound can be adequately cared for. By this form of treatment he reduced the mortality of this type wound considerably. In operating on thoraco-abdominal wounds, the production of an open pneumothorax through opening the abdomen—there is a rent in the diaphragm creating a direct connection between the pleural cavity and the outside—should always be kept in mind. Therefore intertracheal anesthesia is the anesthesia of choice.

All patients with chest injuries are given sulfadiazine in one gram doses six times per day, and if for any reason they cannot take it by mouth, sodium sulfadiazine in-

travenously is given. Penicillin, 20,000 units every three hours, is given to all cases, and when the chest is aspirated, 40,000 units in 20 cc. of normal saline are instilled into the chest on completion of the aspiration. In thoracotomies, 100,000 units of penicillin are left in the pleural cavity as it is closed. If an intercostal catheter is in the chest, it has to be closed intermittently to prevent immediate draining off of the instilled penicillin. If infection occurs the dosage of penicillin is increased. Oxygen is given freely, morphine in as small amounts as is compatible with comfort, and the patient is usually maintained in a semi-sitting position, and he is encouraged to clear his bronchial tree through forceful coughing.

Anesthesia is one of the most important aids to the surgeon who has to deal with chest injuries. The use of atropine in pre-operative medication is very important, and when the chest is opened, novocaine block at the root of the lung will prevent much of the coughing associated with intrathoracic manipulation. Endotracheal gas-oxygen-ether anesthesia is the anesthetic of choice. To be able to regulate the interthoracic pressures makes this type of surgery much safer for the patient and easier for the surgeon. A complete reexpansion of the lung at the completion of the surgical procedure is the desired thing. The experienced anesthetist is frequently the difference between a successful operation and a mortality.

Complications which follow chest injuries, in the order of frequency are, infected hemothorax, organized hemothorax, bronchio-pleural fistula, subphrenic abscess, pneumonitis and abscess about a foreign body, tension pneumothorax, atelectasis, hemotysis secondary to the presence of a foreign body, pericarditis with effusion, and pneumonitis and abscess at the site of a hematoma in the lung parenchyma. Following proper and meticulous surgery, the proper choice of procedure, skillful anesthesia, and thorough postoperative care, patients with chest injuries do well, and the mortality is minimal. Under such treatment as outlined, the patients are spared the long period of illness which they faced at one time, the danger of calcified hemothorax is avoided, unexpanded lungs are rare, and the outlook of being a chest invalid the rest of his life is no longer a horror.

SUMMARY

1. X-ray films should replace fluoroscopy in the early study of chest injuries. Fluoroscopy to localize accurately small amounts of remaining fluid in the regimen of completely drying up the chest is a good procedure.

2. Shock must be vigorously treated, and the normal mechanics of respiration restored. Large quantities of blood are frequently necessary, and frequently more than one vein at a time is used to insure rapid restoration of blood volume.

3. Patchy atelectasis, seen in a large percentage of chest injuries, is due to bronchial constriction, increased secretions, and an inability of the cilia to clear the bronchi of this excess secretion. Intravenous atropine and papaverine, suction to clear the bronchial tree, injection of the intercostal nerves supplying the site of injury, and supplemental oxygen will usually clear up this condition.

4. All open chest wounds are completely debrided.

5. All cases of fractured ribs associated with parenchymal lesions have the intercostal nerves in the region of injury blocked with novocaine.

6. Hemothorax is treated by immediate aspiration to dryness without air replacement. The aspirated blood may be used as an autotransfusion.

7. Indications for the removal of foreign bodies are set out.

8. Tension pneumothorax in chest injuries can usually be relieved by a large needle in the second intercostal space anteriorly, but if this is not successful, a catheter through which suction is applied to the pleural space is the method of choice.

9. Sucking wounds of the chest are debrided, intrathoracic pathology corrected, and the chest wall is closed. A closed system of intercostal catheter is left in place for 48-72 hours, and if drainage is minimal, and there is no bronchiopleural fistula, it is removed at the end of this time. The already infected chest wall must be temporarily closed until the infection can be cleared up.

10. The mortality rate of thoraco-abdominal injuries remains high when compared to other types of chest injuries. Repair to fractures to the dome of the liver, splenic-

tomy, and exploration of the splenic flexure of the colon may be carried out better through the diaphragm than through an abdominal approach.

11. All chest injuries are given either oral or intravenous sulfadiazine and penicillin.

12. Endotracheal gas-oxygen-ether anesthesia with pressure control is the anesthesia of choice. Atropine in preoperative medication is insisted upon.

Bone Grafting—The study of bone grafting teaches us that bone should be considered as a tissue, the survival of which is dependent upon good nutrition. Every effort should be made to favor the nutrition of the soft tissues about the fixed bone in the operative field. The periosteum should not be separated from the soft tissues about the surface of the fixed bone in the operative field. The best method of exposing the bone is to loosen the periosteum from it and not traumatize the tissues lying external to the periosteum. As in skin grafting, all infection must be controlled before proceeding in grafting, otherwise failure with necrosis and sequestration is inevitable.

Bone grafting is usually performed for non-union, whatever its cause, or to replace loss of substance, or to produce and hasten fusion. For years, six months has been accepted as a sufficiently long period to wait for union to occur. That non-union will occur can frequently be determined from the x-ray appearance of the bone ends, by their separation or by the non-appearance of radiable callous. The type of injury, with the destruction of bone and soft parts and circulation, may have been the real cause of the non-union. Interposition of soft parts frequently interferes with bone healing. Repeated early manipulations, over-pull or distraction, incomplete immobilization, infection or loss of substance may have played a part in its production. It is probably about 95 per cent preventable. In femoral fractures, if open reduction is necessary after eight weeks, some type of graft is recommended.

Regardless of the many theories advanced, the bone graft primarily acts as a means by which the blood circulation is reestablished between the two ununited fragments, and when this happens union of the fracture occurs. In non-union, following compound fractures, grafting should not be attempted until six months after healing. In the past few years modern therapy has aided materially in shortening this period with safety. Then it is safe to proceed with scar excision and a pedunculated skin graft or dermatome split thickness grafts if the skin cannot be closed. After healing, radiant heat and massage are administered for two weeks and then, if latent infection is not lighted up, it is safe to proceed with the bone transplant.—*Compton, J. M. A. Georgia, April '46.*

THE STILL-CHAUFFARD SYNDROME
RHEUMATOID ARTHRITIS WITH SYSTEMIC
MANIFESTATIONS

GEORGE SELLERS GRAHAM, JR., M. D.
Birmingham, Alabama

It has been realized for a number of years that rheumatoid arthritis can sometimes be a disease that affects not only the joints but also other parts of the body. However, there has been far too little emphasis placed upon the generalized systemic nature of certain cases of arthritis deformans. This is unfortunate because the clinician thus tends to forget the natural history of chronic rheumatoid arthritis, and also is likely to be badly misled when he encounters the cases in which the generalized systemic reaction is present in association with joint manifestations. Treatment of the patient suffers because a disregard for the natural history of the disease causes therapy to become channelized and sterile. Furthermore, the necessity for avoiding an incorrect diagnosis is apparent.

With this in mind, it was of interest to observe recently a case of the so-called Still-Chauffard syndrome. While not as rare as the syndrome described by Felty, nevertheless this symptom complex vividly illustrated the widespread nature of the disease processes in rheumatoid arthritis and afforded a stimulation to review certain pertinent references in the literature. Some aspects of the trend of medical thought on the subject of rheumatoid arthritis will be discussed, and the case report illustrating the Still-Chauffard syndrome will be included.

Chronic infectious arthritis associated with generalized periarticular lymphadenopathy in seven adult cases was reported by Chauffard and Ramon in 1896. The patients had exacerbations of the rheumatoid symptoms during which they had slight to moderate chronic febrile periods. Two of the patients had evidence of cardiac disease, there being murmurs and slight cardiac enlargement. There was no mention of any other generalized or systemic effect aside from the lymphadenopathy and evidence of cardiac disease.

Still, in 1896, described twelve cases of a disease in children which was characterized, as he put it, by "chronic progressive enlarge-

ment of joints, associated with general enlargement of glands and spleen."

McCrae, in 1904, reported on a series of one hundred and ten cases of arthritis deformans from the service of Dr. Osler at Johns Hopkins Hospital. In thirteen of these cases, he noted generalized lymphadenopathy. In other words, he observed thirteen cases of the type first described by Chauffard and Ramon. In four other cases, he observed splenomegaly. In eight, he observed skin pigmentation of moderate to marked degree, and in six of his patients, there was a leukocyte count of five thousand or less. McCrae thus was the first to emphasize the very generalized nature of the disease process which could be seen in rheumatoid arthritis. While others had described generalized lymphadenopathy in association with arthritis deformans, and had described splenomegaly in association with it, it remained for McCrae to bring together all of these and to add in addition skin pigmentation and leukopenia. The literature then contained the basic description of systemic disease in which there was a deforming arthritis of the rheumatoid type, and in which there could be generalized lymphadenopathy, splenomegaly, skin pigmentation and leukopenia.

Von Jaksch added to this picture the presence of anemia, when he described in 1908 the case of a forty-five year old patient who had chronic arthritis deformans, and a very much enlarged spleen, and anemia and leukopenia.

In 1914, Politzer referred to the "Still-Chauffard" disease in regard to two adult patients with arthritis and enlarged lymph nodes and splenic tumor. It is from this article that the term "Still-Chauffard" syndrome is derived in subsequent literature.

In 1924, Felty described five cases of a disease in middle aged adults characterized by chronic arthritis deformans, splenomegaly, lymphadenopathy, leukopenia and cutaneous pigmentation. He thus observed in each of the patients the association of all the systemic manifestations of chronic

arthritis deformans (except anemia) which had been previously described in isolated reports and in an incomplete picture. Felty considered the disease complex to be the counterpart of Still's disease in children. He made the point that there were two possible explanations of the disease. Either, he was seeing patients who had rheumatoid arthritis plus an associated and coincidental disease, producing splenomegaly, and leukopenia, and skin pigmentation, and lymphadenopathy, or else he was seeing patients who had one disease—a disease usually characterized by arthritis alone, but in these patients having associated findings due to a long continued action of a poison or hypothetical noxa on various systems of the body. Felty leaned towards this last explanation, and he reached his conclusion on purely clinical grounds.

Lockie and his associates reviewed the chief pathologic picture in the Felty's syndrome (which we have seen to be the Still-Chauffard syndrome plus the addition of leukopenia and cutaneous pigmentation) and brought out that the disease is essentially a chronic, non-specific, inflammatory reaction in the spleen and lymph nodes, the liver, the heart muscle, the thyroid, bone marrow and the joints. It is thus observed that while clinically these systemic manifestations may be apparent in the peripheral lymph nodes and the spleen, skin and circulating blood, the pathologists have extended the scope of the systemic involvement by adding the definite observation of disease changes in the heart muscle, liver and thyroid. In this respect, these pathological findings confirm Felty's clinical deduction that the pathologic and pathogenic basis for the widespread changes that occur in certain cases of rheumatoid arthritis, is a chronic low-grade blood stream infection or toxic process affecting not only joints but also other structures, especially the spleen, liver, bone marrow and lymph nodes, and at times the heart and thyroid. According to this theory, the varying response to injury of the different tissues of the host determines the symptomatology and accounts for the different clinical pictures observed.

However, on the basis of the evidence at hand, this theory is not very tenable. For example, while some investigators have been able to isolate pathogenic organisms

from the blood stream in these cases, nevertheless many others have not been able to do this. Furthermore, the organisms which have been isolated have been inconstant in all but a few cases. It is certainly fair to make the point that when the majority of laboratories are unable to consistently isolate bacteria from identical clinical syndromes then we are entitled to question the statement that these organisms may be the etiologic agent. We are all aware that the laboratory is open to occasional error, and good clinical pathologists continue to warn us that we should not hesitate to disregard a laboratory finding if we feel that the clinical findings warrant that course of action. In the present case, it seems fair to do this.

While it has been stated that the source of the toxic agent, which causes the widespread changes in this disease, may be coming from a "chronic focus of infection" rather than a circulating pathogen, nevertheless, here again clinicians have long observed that there are many cases in which every possible source of chronic infection has been eliminated with no effect on the course of the disease. Furthermore, such cases as we have described have come to autopsy, and very careful postmortem studies have failed to reveal a nidus of infection from which "bacterial toxins" could escape into the circulating blood.

And yet, while it may be possible for us to question the theory of a chronic bacterial etiology in these cases, nevertheless, if we do so, we are left without any very firm idea regarding the *modus operandi* in this systemic disease with predominant joint manifestations. Furthermore, if we throw out the concept of "sepsis lenta," we lose a basis upon which most of our therapy has been founded. And so, it is readily seen that there are very good points to be made on both sides of the argument that chronic sepsis, focal or circulating, is the etiologic factor in arthritis deformans with systemic manifestations.

As Felty stated, there is yet another possible explanation of the process. While he felt that it was not likely, nevertheless he remarked that he could be observing two separate and distinct diseases—one involving the joints, and the other involving certain organs or systems of the body. This

point was very well taken, not only because it might be an explanation for some of these cases but also because, when it is borne in mind, we will be less likely to misdiagnose certain conditions that may be associated with rheumatoid arthritis. For example, we do not become particularly alarmed when a case of chronic atrophic arthritis is observed that shows, in addition to the joint changes, a loss of weight and slight fever, skin pigmentation, subcutaneous nodules, and secondary anemia and lymphadenopathy. We have been assured that these are to be expected in chronic atrophic arthritis of severe degree. However, if a patient presents himself with the above findings, or with arthritis deformans plus splenomegaly or hepatomegaly, or leukopenia, we must immediately realize the necessity of careful and intense investigation in order to be certain that the patient is not actually suffering from two separate diseases. That is, we must take great care to rule out such things as chronic malaria, Banti's syndrome, early cirrhosis of the liver, agranulocytosis, aplastic anemia, the lymphoma group including Hodgkin's disease and lymphosarcoma, and such generalized systemic diseases as tuberculosis and syphilis. Obviously, a most intense and careful investigation must be carried out in order to be sure that none of the above conditions are present with the joint affection. Furthermore, we do not discharge our obligation to the patient unless we can assure ourselves that such is not the case.

Many of the great clinicians have long pointed out that there is a strange and close clinical association in many instances between such bizarre and rare diseases as lupus erythematosus disseminatus, periarteritis nodosa, scleroderma, and rheumatoid arthritis with systemic manifestations. In addition, it does not seem that it would be going too far to include in this group rheumatic fever and the scleroderma syndromes, such as Werner's syndrome.

This fact of the possible relationship between rheumatoid arthritis, with systemic manifestations, and these other diseases is brought out for two reasons. In the first place, it may be possible, by studying all the members of this group, to elucidate eventually a definite relationship between them, and thus arrive at a basic etiologic factor which will be of value in understanding

their natural history, and be of value in treating them. In the second place, the close similarity of these diseases must always be borne in mind when studying a patient with rheumatoid arthritis, no matter how typical and classical in type it may appear to be (and even more if it seems to be the rheumatoid type with systemic manifestations). This second point was forcibly brought to our attention recently when a patient was first seen with what appeared to be typical rheumatoid arthritis. She was a young white woman, and there was every reason to believe that she had absolutely typical arthritis deformans. Routine laboratory work and x-ray of the joints were done in her case. She was discharged on symptomatic therapy. Several months later she was given a patent medicine containing bromide by her druggist. She took this, and during the first week that she was taking it she was out in the sun a considerable amount. The two factors together, that of sunlight and bromide, precipitated a most acute exacerbation of what was found to be typical lupus erythematosus disseminatus when she returned. No more classical case of disseminated lupus could be imagined. As indicated, this experience served to crystallize in our mind the importance of regarding with respect every patient with rheumatoid arthritis, and the importance of having a strong index of clinical suspicion whenever one sees such a patient. It is extremely doubtful that it would have been possible to have diagnosed this patient as disseminated lupus when she first presented herself with the findings typical of arthritis deformans. There was no indication whatsoever of the widespread generalized lesions of lupus. Furthermore, the arthritis was apparently typical of the rheumatoid type. And yet, this clinical experiment, performed for us by nature, revealed the fact that two diseases so apparently foreign to each other, may either be actually closely related, as has been suggested, or else the onset of the two may be so very similar as to defy early differential diagnosis. It is possible that her presenting arthritis was genuine rheumatoid arthritis. On the other hand, she might have had the arthritic manifestations of disseminated lupus or she may have had two separate and distinct diseases. Since we were unable to obtain a postmortem it is impossible to decide this point.

The following patient, with the so-called Still-Chauffard syndrome, was of great interest to us as illustrating the widespread systemic nature of arthritis deformans.

CASE REPORT

Mr. O. D. L. was first seen on 8/28/45. The patient was a forty-two year old white male, post-office clerk, married, the father of two children. He presented himself with complaint of arthritis of four years duration, intermittent at first, and constant for the previous eighteen months before being seen at our office. The arthritis involved the spine, shoulders, jaws, knees, hands and fingers, and elbows. Three months prior to being seen, after a severe day during which he had been on his feet a good deal, he noticed swelling of his legs and ankles and such marked joint discomfort that it was necessary for him to stop his work for nine weeks. Since that time, whenever he was on his feet, he noticed that his lower legs and ankles and feet would become slightly swollen. He had lost ten pounds in the previous twelve months. For about six weeks he had had a little nausea almost constantly. He had noticed epigastric pain, both before and after meals, at various times of the day, and lasting thirty to forty minutes. No particular home medications relieved it.

The system review revealed that his appetite was fair; that he tired easily; that he recently had had his upper respiratory tract and teeth checked by a competent dentist and otolaryngologist; that he had been experiencing some shortness of breath on exertion; that his tonsils had been previously removed.

Aside from an appendectomy in 1930, he had had no other previous illnesses except for the usual childhood diseases. There was no rheumatic history in the family.

Physical Examination: The patient was a well developed, poorly nourished, very pale white male, looking somewhat older than the stated age. His skin showed no changes, and the eyes, including examination of the fundi, were negative. The teeth and gums showed no obvious disease. The tongue was clear. The throat was negative; the thyroid was not enlarged. There were many small shotty, non-tender, lymph nodes in the anterior cervical triangles and submental regions. There was a grade 1 apical and basal systolic heart murmur, and the rate was rapid, being 92. The heart was not enlarged on physical examination. The blood pressure was 120/62. The spleen was palpable, being felt one fingerbreadth below the left costal margin on deep inspiration. The examination of the prostate was negative for hypertrophy or tenderness. The anus and rectum were negative. The extremities showed a thirty degree flexion deformity of the right elbow, and fusiform deformities of the right and left second and third fingers. The reflexes were grossly normal.

Laboratory examination revealed, on urinalysis, an occasional white blood cell per HPF; hemoglobin was 54 percent with 2,230,000 red cells and 10,300 white cells. The differential count showed 79 percent polymorphonuclear cells, 13 percent

small lymphocytes, 6 percent eosinophiles, 2 percent basophiles. The stool was negative for occult blood and parasites. The Wassermann was negative. The blood non-protein nitrogen was 25 mgms. percent, and the blood sugar was 100 mgms. percent. The total protein was 6.1 grams percent of serum with an albumin content of 3.6 grams percent of serum, and a globulin total of 2.5 grams percent of serum. The electrocardiogram showed no deviation from the average normal, and the stethogram showed a short, slight systolic murmur in the mitral and aortic area. Gastric analysis revealed a free hydrochloric acid of 56 degrees, and 75 degrees of free hydrochloric acid after alcohol stimulation. All agglutinations were negative, and the undulant fever skin test was negative. The blood uric acid was 4.2 mgms. percent. A cephalin cholesterol flocculation test showed no precipitation after 48 hours.

On x-ray examination, the heart was normal in size and position; the lungs showed increased hilar markings and slightly increased peribronchial markings. There was a slight roughening of the lower three centimeters of the esophagus on a barium meal, but no varices were made out. The stomach was negative except for moderate hyperactivity and hypertonus. The duodenum and remainder of the small intestines appeared normal. The duodenal loop was not remarkable. On twenty-four hour viewing, there was a heavy stasis of barium in the ascending and transverse colon. The Graham-Cole test showed that the gallbladder visualized with good dye concentration, and emptied ninety percent, and there were no stones. The intravenous pyelogram revealed the renal shadows normal in size and outline, and location in the prone position. The renal pelvises filled well, and the right pelvis was bifid. In the erect position, the right kidney pelvis was low in the abdomen, being opposite the sacro-iliac joint. No stone shadows were made out, and there was no evidence of ureteral obstruction. Roentgenograms of the right elbow and both knees were negative except for diminished thickness of the joint cartilages and slight spur deformity in the right elbow.

The patient was felt to have arthritis deformans of the Still-Chauffard type. He was placed on a high caloric, high vitamin, and high protein diet, and given ferrous gluconate and extralin capsules. He was told to report for recheck in two months. On reexamination, the hemoglobin was 65 percent with 2,400,000 red cells, and 10,000 white cells. The differential count was essentially unchanged. Despite his statement, that he felt much better, and was not having as much pain, and that his strength was better, there was a loss of six pounds in weight, and, as shown above, there was no change in the severe secondary anemia. At this time, the epitrochlear nodes were noted to have become palpably enlarged, being about the size of a green pea. There were two peanut-sized nodes in the left axilla. The spleen had not changed in size.

The two left epitrochlear nodes were removed for biopsy, and the microscopic report stated that there was evidence of a non-specific, chronic, inflammatory process in the biopsy specimen.

As was mentioned above in the discussion preceding the case report, it became necessary, before a diagnosis of the Still-Chauffard syndrome could be made, to rule out every possible systemic disease which might produce this man's symptoms and findings. As will be seen, every measure which might give any information was done. As far as could be determined, without postmortem examination, there was no evidence of chronic liver disease, of chronic malaria, of Banti's disease, of any of the lymphoma group, of gastro-intestinal malignancy, of renal disease, of aplastic anemia, and of tuberculosis or lues. It was felt that clinically this patient represented a typical case of arthritis deformans in which the widespread systemic effect of the disease process is noted.

DISCUSSION

Hatch has recently emphasized that it is undoubtedly a mistake to apply an eponym to these syndromes of rheumatoid arthritis with systemic manifestations. In the above mentioned case, the systemic effects were those of splenomegaly, peripheral lymphadenopathy, and severe and intractable secondary anemia. By applying an eponym, we are prone to attribute the signs and symptoms such as those above, as well as fever, weight loss and leukopenia, to the rheumatoid process. While this may be correct, and it may be the rheumatoid process causing all these, nevertheless great care should be exercised to be certain that there is no associated disease process, such as Felty himself originally suggested, and such as many investigators have since pointed out.

Furthermore, by avoiding applying an eponym to this disease process, we become more aware and more conscious of the widespread nature of this disease and realize that it may present a spectacular condition by virtue of its protean effects. Because of this fact, and by reason of the necessity of a very careful and thorough consideration of the differential diagnosis, we can, therefore, accumulate a mass of data on these cases. It is felt that all cases such as this patient represents should be studied very carefully, and then reported in the medical literature. Very careful clinical and laboratory studies should be made. In this way, the literature will slowly accumulate a store of information on this and allied disease processes. It will then be possible to study and sort out these various findings, and possibly arrive at a more definite conclusion in regard to the etiology and pathogenesis. Furthermore, we will gain an interest in this disease

which is too often put aside by us as hopeless, and the patient left to his own devices, often winding up in the hands of a charlatan.

In addition, as more data are accumulated on patients such as this, there will be more opportunity afforded of investigating whether or not the suggestions may have some basis that arthritis deformans is related to the other disease syndromes previously mentioned such as dermatomyositis, lupus erythematosus disseminatus, and rheumatic fever.

2234 Highland Avenue

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Carcinoma of the Cervix—It is unfortunate that there are a few individuals who still practice the technique of surgical removal of carcinoma of the cervix uteri in advanced cases of type three and four. All the cases I have seen or heard of have proved fatal, having encountered many and varied complications, such as vesicovaginal fistula, rectovaginal fistula, ureteral fistula, and ureteral obstruction with secondary manifestations of involvement of the kidney proper. This has left a sad trek of symptoms and suffering to the unfortunate patient and has caused adverse criticism of the medical profession. The profession as a whole has suffered because of the unfortunate attitude of a few. We are judged more by our failures than by our successes, among the laymen, but it is within our control to lessen these errors of commission still being instituted in these type three and four cases. One should have the faculty to control his endeavors of procedure along lines of what is manifestly for the greatest good of the patient; admitting the limitations of surgery and adding such other methods as can be used in a supplementary way, particularly radium and deep x-ray therapy. So as not to be misunderstood, let me emphasize that I personally believe that most of the type three and four cases should have the advantage of an exploratory laparotomy irrespective of whether there is any definite tubal or ovarian infection. By exposing the pelvic cavity through an operative procedure, one can more definitely and thoroughly survey the degree of involvement of the carcinomatous extension outside the cervix.—*Hofmann, J. M. A. Indiana, April, '46.*

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UNFAVORABLE REACTIONS TO ATABRINE

"Army experience in all malarious theaters has shown atabrine to be extremely valuable for the suppressive treatment of malaria. Untoward reactions possibly attributable to the drug have been few, considering the large numbers of men who have been taking it and the long periods during which it has been administered. In no instance have reactions been of sufficient consequence to warrant discontinuance of the drug in a military organization or in a geographic area. As a rule, minor unpleasant reactions, such as intestinal disturbances, which not infrequently occur with the first few suppressive doses of atabrine, disappear in a few days when the drug is continued."

The above is the first paragraph of a special article¹ in the Journal of the American Medical Association dealing with this subject and it describes cases observed in New Guinea and adjacent islands and in Assam and North Burma. The article goes on to state that a characteristic cutaneous syndrome which has acquired the name "atypical lichen planus" has been observed and that in general the cutaneous manifesta-

tions are those of lichenoid dermatitis, eczematoid dermatitis and of exfoliative dermatitis.

"The prognosis varies from one person to another. In general, it seems excellent, especially if the patient is hospitalized early in the course of the disease and the therapeutic measures outlined are initiated promptly. The lichenoid lesions disappear slowly, but they do not tend to recur; the eczematoid phase of the eruption may disappear rapidly, but it tends to recur and is responsible for the prolonged disability which occurs in some cases. In general, recovery is a matter of weeks and months."

In rare instances aplastic anemia, agranulocytosis and severe acute hepatitis were encountered with generally fatal results in the first and third conditions.

"The fact that psychologic disturbances occasionally appear in association with the use of atabrine is well known. When unduly large doses are given, and rarely with moderate doses, for clinical treatment, toxic delirium, such as occurs with bromides, may develop. The psychologic disturbance may take the simple form of brief periods of confusion."

And in conclusion we are told that:

"1. The military value of atabrine in suppressing vivax malaria and curing falciparum malaria far outweighs untoward effects which have been attributed with reason to the use of the drug.

"2. Suppressive doses of atabrine greater than 0.7 gm. per week should not be employed routinely. This amount has been shown to provide adequate protection against clinical attacks of malaria, provided 'atabrine discipline' is strictly enforced. In clinical treatment of malarial attacks with atabrine, routine dosage should not exceed 2.8 gm. in seven days.

"3. Atabrine suppressive medication should be discontinued promptly and atabrine not given for clinical treatment when persons develop atypical lichen planus, unexplained chronic eczematoid dermatoses, unexplained toxic erythematous eruptions, exfoliative dermatitis, severe leukopenia, agranulocytosis and aplastic anemia, acute hepatitis (not including disturbances believed to be due to malaria) or toxic psychoses which can be reasonably attributed to atabrine after careful clinical study.

1. Untoward Reactions Attributable to Atabrine. Special Article. J. A. M. A. 129: 1091 (Dec. 15) 1945.

"4. It should be remembered that drugs other than atabrine, such as sulfonamides and arsenicals, may be harmful to persons with the conditions mentioned.

"5. Caution should be exercised in attributing disease conditions to atabrine until careful and complete studies have been made over a period of time to establish such relationship. Because of the widespread use of atabrine, its administration inevitably coincides with many diseases with which the drug has no connection. Even if a connection is established between atabrine and a given untoward effect, its significance relative to the military value of atabrine requires evaluation. It should be remembered that, since the use of atabrine became widespread, clinical attacks of falciparum malaria have been almost eliminated and deaths from malaria have been extremely rare. There is no question of the general superiority of atabrine over quinine, both for suppression and for clinical treatment."

Only physicians who were in practice before the advent of atabrine can fully realize of what inestimable value the drug is in the treatment of malaria. For many years the profession has been too fearful of its toxic effects, both real and alleged. And careful studies, such as those in the special article, will do much to clarify the situation for all who must deal with the ravages of malaria.

SPECIAL TRAIN TO SAN FRANCISCO

The Oklahoma State Medical Association is sponsoring a special train to the 1946 session of the American Medical Association to be held in San Francisco July 1-5, and invites other state associations to join the Oklahoma physicians on the trip. Members of the Association who are interested may procure detailed information from Mr. Harry E. Kornbaum, Rainbow Travel Service, First National Bank Building, Oklahoma City.

TRANSACTIONS OF THE ASSOCIATION

1946 SESSION

PART I

TRANSACTIONS OF THE ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA HELD AT BIRMING- HAM, APRIL 16-18, 1946.

First Day, Tuesday, April 16

The Medical Association of the State of Alabama convened in the ballroom of the Thomas Jefferson Hotel, Birmingham, and was called to order at 10:00 A. M. by the President, Dr. Walter F. Scott, of the host city.

Invocation was offered by Rev. Francis J. Foley of St. Paul's Catholic Church.

Address of welcome was delivered by Hon. Clarence M. Pinson, President, Jefferson County Board of Commissioners; and Dr. Joe M. Donald, President, Jefferson County Medical Society. Mr. Pinson's address was as follows:

My Friends:

I deem it an honor to be afforded the opportunity of extending to you a welcome to our City and our County. It is an honor to us to have

you present here. I think that our City is the proper place for such a meeting as yours, because it was apparently endowed and selected by destiny for mighty things. The industrial and business life of our State centers around our City, lying in the heart of a valley whose bed is limestone, whose northern flank is coal, and whose southern flank secretes iron ore in unlimited quantities. The principal materials for industry's very sinews—iron and steel—are available here for the cheapest and quickest production on earth. A region so naturally endowed with raw materials is naturally concerned with the health of its people, to which service your lives, your education, and your talents are dedicated.

This is a great time for such a convention, as we face and plan for the era of peace. The war taught us many things about the health of our nation. I know of no group that carried a heavier load than you during the years of trial through which we have so gloriously passed. You did your jobs then, and I am sure you will do it today, and tomorrow and always, fearlessly, patriotically, sincerely, and with the single purpose of continuing the onward march of progress of our State and our County.

You are identified with a cause and profession second in my opinion only to the clergy. Causes to which we belong can so absorb us that their success or failure is our own. Patriotism can so affect millions that the lives they live within

their bodies are willingly sacrificed on behalf of the larger national life into which they have extended themselves. Wilberforce identified himself with the victims of the slave trade, Florence Nightingale with the wounded in a horrible war, the medical profession of Alabama with the care and treatment of the ill, and with the cause of public health; and you have done it with such a spirit that those of us who are familiar with your work can express to you this morning the sentiments of unresented thousands whom you have treated by the words "Inasmuch as ye have done it unto the least of these my brethren, ye have done it unto me."

I extend to you the welcome of this County. We are honored with your presence. We are anxious to serve you in any capacity possible. I know from an examination of your program that you have much business to be attended to, and my words are restricted by the fact and by the recollection of a short poem I once heard:

"A wise old owl lived in an oak,
The more he saw the less he spoke,
The less he spoke the more he heard,
Why can't we be like that old bird?"

You know, when I was invited to welcome you I accepted with some temerity. I told your committee that I knew there were others who could do a better job, but they insisted that I take a block and tackle cocktail and attempt the job. You know a block and tackle cocktail is where you drink one, walk a block, and tackle anything.

I want to use this opportunity to thank the members of your profession from the bottom of my heart on my own behalf and on behalf of the people of this County for the help and co-operation, and advice and counsel, many of you have given us. I want each of you to know that if there is anything I can do to make easier the business of this meeting, and your entertainment, the performance will be a pleasure.

Vice-President J. O. Morgan of the Northeastern Division of the Association, Gadsden, presented President Scott who delivered his message as follows:

The President's Message

Members of the Medical Association of the State of Alabama:

Before rendering an account of my stewardship during the past two years, let me express to you my thanks and appreciation for the great honor you have conferred upon me in electing me President of this Association. To follow in the footsteps of the many truly great leaders who have preceded me is indeed a great honor. I am deeply grateful. I must contritely apologize for the many things that I have left undone. Time and circumstances contributed mostly to my deflections.

From the viewpoint of the presidency, one gets a clearer and better understanding of the activities and objectives of the organization; and, more important, one sees and learns how much

this Association means to its members. It is true that here and there rumblings and grumblings are heard but to me this is a good omen; to me it means that there is a desire to change and improve conditions. No organization can thrive on tranquillity and contentment. I have found that there is true co-operation and real unselfishness among the members of this Association. No single member has refused to perform any task or to accept any position in which his services were needed. On the contrary, every request has been accepted graciously and willingly. I am under obligation to these gentlemen. Especially am I grateful to our most efficient and obliging Secretary. I have found, as some have said, "he knows all the answers"; to which I add "and gives freely of his knowledge." To the Chairman of the Board of Censors, I am obliged and grateful for his excellent advice on many occasions. To all the other officers, I offer my thanks and appreciation for a job well done under most trying conditions.

During the past two years, thanks to the Board of Censors and the other officers, the activities of the Association have been carried on remarkably well in spite of being handicapped by shortage of personnel and increased demands. Our State Health Officer, Dr. B. F. Austin, has most efficiently continued the work of the Health Department, curtailing its activities not at all or only when absolutely necessary. He has handled the difficult situations in a most praiseworthy manner.

The four Vice-Presidents have held at least one meeting in their respective areas, a no mean feat under the existing conditions. I had the pleasure of attending the meetings in Union Springs and Decatur. To my regret I was unable to attend the other two. The ones I went to were exceptionally well attended and of a quality comparable to any peace-time gathering. Many thanks and congratulations to our Vice-Presidents for their continued good work. The Woman's Auxiliary has held itself together admirably. Monthly meetings have been held in various cities throughout the State. Under the presidency of Mrs. J. Mac Bell of Mobile, it is looking forward this year to its best and most enthusiastic meeting. The Committee on Cancer Control has continued its excellent work. The Field Army of the American Cancer Society, under the leadership of Mrs. Ray Meade, has made unprecedented strides. Every county in the State has been organized for the early diagnosis and control of cancer.

To my mind the most outstanding event of the past two years has been the actual opening of a four-year medical school in Birmingham. In the early summer of 1945 the third year in medical teaching was started with twenty-two students. Thus was fulfilled the earnest desire of the medical profession in Alabama for many years. According to the Board of Censors in their last report, this was "the achievement of the century in Alabama medicine." The mere statement that a four-year medical school is in operation tells only a small part of the story. No one who has not actually witnessed the birth

of this event can remotely realize the many hardships, trials, tribulations and disappointments that were met and overcome before it was actually delivered. In spite of all the difficulty and anxiety of its birth, I am happy to report to you it is now a robust, growing young medical school with every prospect of being in a short while the equal of any such institution in these Southern States. The medical profession and the citizens of this State are under everlasting gratitude to Dr. Roy Kracke, who, as Dean, almost single-handed accomplished what many thought was impossible. I know his ideas of conducting a medical school will meet the approval of everyone, especially his ideas that the Medical College of Alabama is primarily for the education and training of the young men and women of Alabama for the practice of medicine. I respectfully extend to Dr. Kracke the thanks and appreciation of this Association. He has done a remarkable job.

At this last meeting of this Association, the President was instructed to appoint a Postwar Planning Commission, whose job it would be to study the situation (of postwar medicine) particularly in our own State; to keep in close touch with the action of the American Medical Association; and to make to the Board of Censors any recommendations it deemed necessary for our particular difficulties. Immediately following the last meeting, this Commission was appointed with Dr. M. S. Davie as Chairman; and our four Vice-Presidents, the State Health Officer, and Dr. Carl Grote as members. This Commission has spent long arduous hours and given richly of its time and energy in formulating a feasible and thoroughly workable plan. They visited and investigated the plans in force in many localities, culling the points best suited to conditions in Alabama. They have done most thoroughly and efficiently an outstanding work. Too much praise cannot be given them. On behalf of the Association, I extend our thanks to this Commission.

In addition to appointing a Postwar Planning Commission, the President was instructed to appoint a committee of five, the Chairman to be chosen from Tuscaloosa, to solicit voluntary funds for the painting of portraits of Dr. W. D. Partlow and Governor Chauncey Sparks as an expression of appreciation for their efforts in obtaining a four-year medical school for Alabama. This Committee was promptly appointed, with Dr. Harvey Searcy of Tuscaloosa as Chairman; Dr. W. M. Salter, Dr. J. D. Perdue, Dr. Fred Wilkerson and Dr. Seale Harris as members; and Dr. Douglas Cannon as Treasurer. Usually, the solicitation of money for any purpose is a disagreeable undertaking. Not so in this case. Without any great trouble sufficient funds were voluntarily received to go ahead. I am happy to report that these portraits will be unveiled, with appropriate ceremonies, during this meeting.

Like my predecessor, Dr. Fred Wilkerson, I view with distress the lack of interest shown in this Association by many of the younger members. I agree with him that the most frequent

complaint is against the Board of Censors and the College of Counsellors. No fault is found with any member of the Board or any counsellor individually. These younger men feel that these two bodies run the affairs of the Association and no one else has any voice in its management and that they can hold no elective office except that of President, and Vice-President. I have a sympathetic understanding of their complaint. I therefore recommend that Section 4 of Article IV of the Constitution which says, "*All members who have been members in good standing of a County Medical Society in Alabama for the five consecutive years immediately preceding any election to fill vacancies in the several offices of the Association shall be eligible to the election to the office of President, Senior Vice-President and Junior Vice-President*" be amended to read "*All members who are members in good standing of a County Medical Society in Alabama shall be eligible to election to any elective office in the Association.*" I hope this change will create more interest in the Association. It will certainly be more democratic.

Section 4 of Article XIV of the Constitution of the Association provides that "*the Association shall not appropriate any of its funds for the purpose of providing festivals, or entertainments at its sessions, nor for any purpose other than such as may tend to perpetuate and proclaim its history, to uphold its organization, and to advance its interests, and likewise those of the cause of scientific and practical medicine.*"

"*The publication of an annual volume of transactions shall be deemed a proper expenditure of funds.*"

I recommend that this Section be amended to read as follows: "*Section 4—The Association shall not appropriate any of its funds for any purpose other than such as may tend to perpetuate and proclaim its history, to uphold its organization, and to advance its interests, and likewise those of the cause of scientific and practical medicine, except a portion of its funds may be allocated for the purpose of defraying the expense of the annual meeting of the Association, including the expense of guest speakers and entertainment.*"

"*The publication of an annual volume of transactions shall be deemed a proper expenditure of funds.*"

Several years ago a similar resolution was introduced and was promptly disapproved. I feel that an Association, the size and eminence of this Association, should make provisions for defraying all the expenses of its annual meetings, such meetings being mandatory by the Constitution. For many years these annual meetings have been held in Mobile, Montgomery and Birmingham, the expense of such meetings, above and beyond the amount allotted by the Association, being met by the local County Medical Societies. I have heard no complaint concerning this assessment, and I know the members of the Mobile, Montgomery and Jefferson County Medical Societies are honored and delighted to have the Association hold its annual

meeting in their counties. But the fact remains that it is an added financial burden which should not be expected and tolerated by this Association.

The science of medicine is growing so rapidly that it is almost impossible to keep abreast of all that is new and good. On this account guest speakers, men of authority in their particular fields, are invited to give to the members of this Association the benefit of their work and knowledge. In repayment for this, I feel that the expenses of these guest speakers should be met by the Association. To do otherwise seems to me to be the height of inhospitality. As to entertainment, I am well aware that the Constitution seems to frown upon such frivolity. Nonetheless, I believe that some wholesome entertainment sponsored by the Association will do much to create goodwill and good fellowship among the membership.

Now that the war is ended, there are or soon will be in this State many veterans with service-connected disabilities. I am told that in a recent survey of all veterans 98 percent favor treatment in local hospitals by local physicians, rather than in Veterans Administration Hospitals.

The Veterans Administration is most anxious to put into effect, as soon as possible, a system under the control of the Association or County Medical Societies for the care of all veterans with service connected disabilities. They have requested that this matter be brought before this Association for discussion. To date, agreements have been made with the State Medical Associations of Kansas and Michigan, and with the Monmouth County Medical Association of New Jersey. In each instance the Medical Society agrees to furnish medical and surgical care to these veterans on a fee basis acceptable to the Medical Society and the Veterans Administration. It is not mandatory. Any member of the Medical Society may participate in this work by accepting the schedule of fees and signifying his willingness to do the work. I therefore recommend that this subject be brought before this Association at this meeting for discussion and action, and that the Veterans Administration be informed of the decision.

It is my opinion that at this meeting the scientific portion of our annual program should be discussed. Since 1939 the scientific program has been divided into general sessions and sectional meetings. Prior to 1939 only general sessions were held. The pressure has steadily grown to increase the number of sectional meetings. In the limited time of our annual meetings, this cannot be done except at the expense of the general sessions. I, therefore, believe that a decision should be made as to (1st) whether to increase the number of sectional meetings and lengthen the duration of the annual meeting or (2nd) to discontinue all sectional meetings, confining the scientific program to general sessions only, and continue the annual meeting time of three days. To bring this to a head, I recommend that at the annual meeting all sectional meetings be discontinued and all scientific discussions be held only in general sessions.

During the past twenty-five years much has been done to control tuberculosis. However, there is much yet to be done. We should be on guard, particularly at the present time, for of all diseases none is more consistently a camp follower of war and its disorganized postwar years than tuberculosis. Great strides have been made in the diagnosis of the disease, but our hospital facilities have been and continue to be very inadequate. The last legislature of this State made available funds (\$1,000,000.00) for the establishment of seven tuberculosis sanatoria, strategically located, adequately staffed, and with operations co-ordinated by the State Health Department. If the present efforts to secure matching Federal funds are successful, there will be available almost \$3,000,000.00 for the construction of tuberculosis sanatoria throughout Alabama in the next few years. Therefore, it seems timely that this Association activate and maintain a responsible body to deal with the problems of tuberculosis control. I recommend that a Committee on Tuberculosis Control be appointed by the incoming President. I suggest that the majority membership of this Committee be selected from qualified private practitioners who have a special interest in chest diseases, with representation from the State Health Department, the Medical College of Alabama, and the Tuberculosis Association.

In conclusion let me again express my sincere thanks to everyone for their help and co-operation. Especially do I thank Dr. Gilbert Douglas, General Chairman, and his various committees for the fine work they have done to make this meeting a success.

The President's Message was referred without discussion to the State Board of Censors.

REPORTS OF OFFICERS AND COMMITTEES

The reports of officers and committees were received and each referred, in its turn, without discussion to the Board of Censors.

Report of Vice-President Jones Southwestern Division

Due to unsettled conditions, no meetings have been held in the Division. County Medical Societies are functioning satisfactorily. Some doctors have returned from the service during the year, and others are expected shortly. I have had the pleasure of meeting with several Societies since my last report to you.

Report of Vice-President Morgan Northeastern Division

Many of the physicians of this district who have been in the armed forces of our country are now returning to their practice. Even with their return there is still a marked shortage of physicians. The hospitals are continuously crowded to capacity and it is necessary to defer many elective surgical cases.

Several of the County Medical Societies are holding regular meetings with good scientific programs. On account of the scarcity of physicians some of the smaller Societies are holding only an occasional meeting.

On December 5, 1944 a division meeting was held at Talladega. We had a most excellent scientific program in the afternoon, and in the evening attended a banquet given by the Talladega County Medical Society. At this time medical education in Alabama was discussed by Doctors Paty, Kracke and Graves. Another meeting was held Nov. 20, 1945 in Gadsden. The host was the Etowah County Medical Society. Excellent papers were given by physicians of the district and also by two guest speakers. Both of these meetings were well attended. They were held late in the afternoon and evening. Many of the physicians felt that this was better than morning and afternoon sessions as had formerly been the practice.

Being Vice-President from this district I had the pleasure of being a member of the Postwar Planning Commission and attended several meetings of this body. A report of the activities of this Commission will be given at this meeting.

Report of Vice-President McCaslan

Southeastern Division

An interesting and instructive meeting of the Southeastern Division was held in Union Springs on October 25, 1944. In addition to scientific papers by Doctors Klingman and Frist of Maxwell Field and Dr. Walter Scott of Birmingham, the ramifications of postwar planning, as applied to the medical profession of Alabama, were discussed by Doctors Davie and Austin.

Due to existing war conditions meetings of the County Medical Societies have been sporadic during the past few years. It is hoped that all of the Societies will resume regular meetings, now that conditions are approaching normal. To have a strong State Medical Association we must have strong component parts, and it is urged that interest in County Society meetings be revived.

Due to illness of the Vice-President no meeting of the Division was held in 1945. For the same reason visits to a number of County Medical Societies to discuss the work of the Postwar Planning Commission had to be cancelled. We hope to resume a normal routine this year.

The practice of medicine in Alabama and the Nation is facing a crucial period. If we are to avoid socialized medicine it behooves the individual members of the Association to wake up and realize the changes that are facing us. The practice of medicine, especially in the rural counties, has reached a critical stage, and it bids fair to get worse unless means are devised to attract young doctors to these rural areas. If the medical profession, through its Association, does not provide a way for better and more adequate medical service to the rural communities the Government will do it for us. It is urged that every one present at this meeting attend the Wednesday night session and acquaint himself with the

work and proposals of the Postwar Planning Commission.

Report of Vice-President McNease

Northwestern Division

Allow me this opportunity to acknowledge gratefully the honor done me at our last meeting when I was reelected a Vice-President of the State Medical Association. I regret that I have been unable to visit many County Medical Societies in the past two years. The heavy pressure of my professional duties, occasioned by lack of medical personnel in our vicinity, has kept me from pursuing other activities. However, I anticipate visiting each Society in my Division during the ensuing year.

As Vice-President of the Northwestern Division my principal contribution to our Association during the past two years has been the work done as a member of the Postwar Planning Commission. I have attended all of its meetings and have done, as best I could, all the work delegated to me by its esteemed Chairman. In meeting the responsibility it has been necessary for me to make trips out of the State investigating prepaid medical, surgical and obstetric plans in active operation elsewhere in order to evaluate their respective merits, and thus assist in developing a plan suitable to the needs of our State. The plan developed by our Postwar Planning Commission is patterned after that in operation in Delaware, and it is our belief that it will be of benefit to the people of Alabama and to us as physicians. A hospital plan has also been developed by the Alabama State Planning Board, in cooperation with the Postwar Planning Commission and the State Department of Health, which will be of equal, if not greater, benefit to the State of Alabama. The prepaid medical, surgical and obstetric plan is now in active operation under the auspices of the Hospital Service Corporation of Alabama, a non-profit organization approved by the State Medical Association.

At the request of our President I attended the regional meeting of the Council of Medical Services and Public Relations of the American Medical Association which was held in Atlanta, Georgia on February 23, 1945. Representatives from the various Southeastern States attended. The purpose of this meeting was to acquaint those attending with the program and work being done by the Council. Special emphasis was placed on the problems of postwar medical education, and educational facilities for returning medical officers. A report of the program of the Washington office was made by its director, Dr. Joseph H. Lawrence. It would seem that Dr. Lawrence's work in Washington will be of inestimable value to the members of the American Medical Association in keeping us informed concerning national medical legislation; and to our Congressmen and Senators, in that they can readily secure from Dr. Lawrence's office any information desired relative to the efforts being put forth by organized medicine to improve the quality and scope

of medical care. Careful study of hospital development plans was strongly advocated, as a survey is to be made for hospital construction and operation in the various states under the provisions of the Hill-Burton Bill.

I attended the conference and seminar sponsored by the National Physician's Committee at the Coronado Hotel in St. Louis, Missouri on January 18 and 19, 1946, having been selected as one of the representatives from our State. Dr. Alfred A. Walker of Birmingham was the other representative from Alabama. Representatives from all but two or three states were present at this meeting. The purposes, as outlined to us by Mr. John M. Pratt, Administrator of the National Physician's Committee, were four-fold:

First. To study thoroughly the proposed legislation known as the Wagner-Murray-Dingle Bill, or Senate Bill 1606, to learn its meaning.

Second. To condition a number of men to appear before the Senate and House Committees when the Bill is called up for hearing by these committees.

Third. To work out groups to go to Washington and consult with Senators and Representatives of their respective states.

Fourth. To lay the foundation for setting up professional committees in every congressional district in order to get points of view of various candidates.

The first day of the meeting was devoted to the reading and explanation of every word of Senate Bill 1606 by lawyers of unquestioned ability. The second day volunteers were placed on the witness stand and examined in the same manner in which the real Senate committee conducts an investigation. The three lawyers who had explained the Bill posed as Senators Wagner and Murray and Representative Dingle. Some of the volunteers made good witnesses, while others ranged from mediocre to very poor. The impression I got from this demonstration was that any one appearing before either of the congressional committees should make a thorough study of the Bill and answer the question at hand in an informed and concise way. Representatives at the meeting were practically unanimous in accepting Title One of the Wagner-Murray-Dingle Bill, with a few minor changes, and were equally unanimous in opposing Title Two. The Hill-Burton Hospital Bill was unanimously approved.

Owing to circumstances beyond my control I have not been able to carry out the obligation I assumed when attending this meeting to go to Washington and contact Alabama's Senators and Representatives, but I fully intend doing so in the immediate future. Hearings are now being held by the Committee on Education and Labor Relations and it is imperative that members of our Association acquaint our Senators and Representatives with the attitude of the Association toward the Wagner-Murray-Dingle Bill.

If it is permitted, I heartily recommend that our Association approve the work being done by the National Physician's Committee and that all of us contribute to this organization liberally.

Only one divisional meeting has been held in the Northwestern Division in the past two years. This was in Decatur on February 28, 1945, with the Morgan County Medical Society as host. The meeting was well attended.

Report of the Secretary-Treasurer

Douglas L. Cannon

CANCELLATION OF 1945 MEETING

It is recorded here, for those who may review in later years the history of our organization, that the Association's 1945 session, which was to have been held in Birmingham April 17, 18 and 19, was cancelled by the State Board of Censors at the request of the Office of Defense Transportation and in the interest of the nation's war effort. Thus, for the first time in seventy-seven (77) years, the profession was denied the privilege of gathering in annual meeting for rest, relaxation, comradeship and enlightening experiences; and yet, even as it had assumed added responsibilities imposed by war, it accepted this deprivation, and others, as a further contribution on its part to the welfare of the country.

Terms of Officers Extended

In the emergency, the Board of Censors, acting for the Association, extended for one year the terms of those serving the Association in an official capacity, adjustments to be made at this meeting so that, as far as possible, terms exceeding more than one year, and which expired in 1945, would date from 1945. To these adjustments, specific reference will be made in a subsequent paragraph.

THE ASSOCIATION'S CENTENNIAL

The hundredth anniversary of the Association will be celebrated in 1947. It would be eminently fitting if that year's session could be held in Mobile, the Association's place of birth; and the Secretary would presume to suggest that a program be planned that will be in keeping with the occasion.

(Here let me interpolate that I have been in communication with officers of the Mobile County Medical Society regarding this matter and the indications are that the hotels of Mobile cannot accommodate the Association in 1947. It would seem necessary, then, to ask Montgomery or Birmingham to sponsor the meeting, although it is doubted that Montgomery can furnish needed facilities. Should the Jefferson County Medical Society invite the Association to meet in Birmingham for the second successive year, it is believed that from the treasury of the Association such part of \$1,000 as might be required in connection with the meeting should be made available to the Society, not forgetting that under present constitutional limitations funds of the Association cannot be appropriated for entertainment purposes.)

PHYSICIANS IN SERVICE

This officer's report for 1943 listed the names of 270 members of the Association who had answered the call to duty. Subsequently, twenty-

five (25) others went into the service. Of the total (295), 205 have returned to the State, fourteen (14) have been discharged and have located elsewhere, and seven died in service. Those who made the supreme sacrifice were Josiah D. Bancroft, Frederick Page Boswell, John M. Clack, Edgar C. Fonde, Seale Harris, Jr., Lester C. O'Neal and William Lee Tucker.

Citations

Seven physicians contributed by Alabama to the armed services of the United States received citations for gallantry and meritorious achievement. Dr. Charles A. Baumhauer received a Silver Star. Bronze Star Medals were awarded Drs. K. P. Benkwith, Samuel Welch Caldwell, Sumner Davis, F. T. England and Arthur F. Wilkerson; and Dr. J. E. Kendrick received the Air Medal also.

MEMBERSHIP OF THE ASSOCIATION

The membership of the Association as enrolled April 1, 1946 is 1,528—thirty-one less than a year ago, and fifty-six less than the number reported to you in 1944. This loss will be compensated for when all reports have been received from County Medical Societies. The total number of physicians (members and nonmembers) in Alabama is 1773, of whom 86.16 per cent are identified with the Association.

DEATHS

Since the report of 1944, seventy-five (75) members of the Association have died, including Life Counsellors Glenn Andrews, M. H. Hagood, L. L. Hill, Clarence Long, E. M. Mason and R. A. Smith; and Active Counsellors S. L. Ledbetter, Jr., W. A. Lewis and G. F. Walsh. The complete obituary record follows:

Andrews, Glenn	Montgomery
Bennett, T. L., Sr.	Florence
Blewett, Means	Mobile
Blue, George E.	Montgomery
Bonds, W. R.	Winfield
Branham, B. S.	Birmingham
Bryars, J. F.	Bay Minette
Chapman, J. A. R.	Goodwater
Clements, H. C.	Benton
Coggin, F. R. B.	Waverly
Coston, H. R.	Birmingham
Cotter, W. A.	Ozark
Davis, John Woodfin	Alabama City
Durrett, E. B.	Bessemer
Ellis, L. C.	Florence
Elrod, R. F.	Ft. Payne
Ferguson, Burr	Birmingham
Folsom, M. A.	Jack
Fonde, E. C.	Mobile
Fortune, J. L.	Huntsville
Foster, J. M.	Birmingham
Glaze, A. L., Jr.	Birmingham
Golson, R. M.	Prattville
Hagood, M. H.	Brewton
Hagood, R. B.	Lowndesboro
Hale, S. F.	Mobile
Hanna, R. C.	Marion
Harris, Charlton S.	Sayre
Heath, M. J.	Ensley

Hill, L. L.	Montgomery
Holman, H. L.	Ozark
Ledbetter, S. L., Jr.	Birmingham
Lewis, W. A.	Enterprise
Long, Clarence	Hurtsboro
Lyon, W. D.	Andalusia
Malone, J. C.	Faunsdale
Mason, E. M.	Birmingham
McCafferty, E. L.	Mt. Vernon
McEachern, C. P.	Geneva
McGehee, P. D.	Mobile
McLaurin, Bernard	Lincoln
McLellan, T. R.	Aliceville
McMillan, S. B.	Frisco City
McMurphy, J. P.	Atmore
McRee, H. C.	Hartselle
Miller, R. H.	Haleyville
Montgomery, A. H.	Montgomery
Moon, E. P.	Wetumpka
Moore, C. H.	Birmingham
O'Gwynn, J. C., Sr.	Mobile
O'Neal, L. C.	Andalusia
Peters, U. J. W.	Birmingham
Pollard, C. T.	Montgomery
Reynolds, R. D.	Ozark
Riggs, S. W.	Pleasant Hill
Routledge, H. W.	Birmingham
Sellers, W. A.	Montgomery
Sellers, W. D.	Birmingham
Shackelford, W. L.	Gordo
Shipp, M. G.	Anniston
Smith, C. K.	Greensboro
Smith, J. L.	Montgomery
Smith, T. O.	Wilsonville
Stallings, H. S.	Troy
Stone, J. T.	Oneonta
Stone, S. G.	Nanafalia
Street, T. H.	Alexander City
Stubbins, S. G.	Birmingham
Troje, O. R.	Fairfield
Walsh, G. F.	Fairfield
Watkins, R. S.	Phoenix City
Whitlock, H. E.	Tuscumbia
Whitney, O. H.	Carbon Hill
Wickliffe, T. F.	Jasper
Wynne, W. H.	Ensley

STATUS OF COUNSELLORS-ELECT

At the last meeting of the Association (1944), eight members—H. W. Allgood, John L. Branch, R. B. Dodson, Dan C. Donald, R. A. Foshee, Amos C. Gipson, W. C. Golden and E. F. Leatherwood—were elected Counsellors. All have qualified fully as required by the Constitution and should be added to the Roll of Active Counsellors at the appropriate time.

OFFICERS TO BE ELECTED

Officers to be chosen at this session are a president, a vice-president for the Southwestern Division, with term from 1945; a vice-president for the Northeastern Division, his term to begin on his election; a secretary-treasurer, dating from 1945; two censors for five years to succeed Drs. E. Caldwell and M. S. Davie whose terms expired in 1945; two censors for five years to succeed Drs. M. Y. Dabney and K. A. Mayer whose terms expire with this meeting; and one

censor to fill the unexpired term of Dr. C. A. Thigpen who was elected in 1943 for a term of five years and resigned May 10, 1944. Dr. Fred W. Wilkerson was appointed by the President to succeed him, and to serve until the 1945 meeting of the Association, when, in the natural course of events, the vacancy would have been filled by the Association, as provided in the Constitution. Since last year's session was cancelled, Dr. Wilkerson continued in office until May 10, 1945 when ill health forced him to resign. By presidential appointment Dr. Thigpen was named his successor to serve until this meeting. It is the responsibility of the Association to fill the vacancy created by his resignation in 1944, the one chosen to serve until 1948.

Twenty-four (24) Counsellors are also to be elected: *From the 2nd Congressional District*, 2—The first term of seven years of N. W. Killingsworth and H. W. Waters expires with this meeting. *From the 3rd*, 2—F. H. Boyd's first term expires this year; Dr. W. A. Lewis is deceased. *From the 4th*, 3—F. H. Craddock's second term of seven years expires with this meeting, as does Marcus Skinner's first term; Jerre Watson's first term expired in 1945. *From the 5th*, 2—The first terms of J. O. Morgan and C. E. Ford expire with this meeting. *From the 6th*, 1—C. E. Abbott's first term ended in 1945. *From the 7th*, 6—The first terms of J. G. Daves and Merle Smith expired in 1945; those of L. C. Davis and R. Lee Hill end this year; D. H. Wright's second term expires with this meeting, and R. H. Redden is to be elevated to Life Counsellor. *From the 8th*, 2—H. M. Simpson's first term expired in 1945; W. R. Taylor is to be elevated to Life Counsellor. *From the 9th*, 6—The first term of C. O. King ended in 1945; John D. Sherrill's first expires this year, as does the second term of J. R. Garber and D. S. Moore, Jr.; S. L. Ledbetter, Jr. and G. F. Walsh are deceased.

APPOINTMENTS TO BE MADE

Committeemen whose terms expired in 1945 or end with this meeting are J. O. Morgan (1945) and B. F. Austin (1946) on Public Relations; C. M. Rudolph (1945) and E. S. Sledge (1946), Mental Hygiene; T. M. Boulware (1945) and Hughes Kennedy, Jr. (1946), Maternal and Infant Welfare; H. M. Simpson (1945) and J. P. Chapman (1946), Cancer Control; Lucien Brown (1945) and W. B. Hardy (1946), Prevention of Blindness and Deafness; Ralph McBurney (1945) and G. O. Segrest (1946), Postgraduate Study; H. Earle Conwell (1945) and C. H. Ford (1946), Accidents and Industrial Health; M. Y. Dabney (1946), Archives and History; and R. E. Cloud (1945) and W. M. Salter (1946), Physician-Druggist Relationships. It will be a responsibility of the next president to name their successors and to appoint a delegate and alternate to the American Medical Association for the 1947 and 1948 sessions of that body to succeed A. A. Walker and G. O. Segrest, respectively, whose term will expire with the current year's meeting. Alabama's other delegate and alternate are Lloyd Noland and E. D. Lineberry who were

appointed by President Scott to serve in the 1946 and 1947 sessions of the American Medical Association.

FINANCE

The accounts of the Association for the years 1944 and 1945 have been audited by Crane, Harper and Wilson of Montgomery and the audit for each of the years constitutes the concluding pages of this report.

In the audit will be found not only statements of cash receipts and disbursements but also a record of securities owned—all U. S. Government Savings Bonds that have been purchased through authority given by the State Board of Censors.

CRANE, HARPER AND WILSON
CERTIFIED PUBLIC ACCOUNTANTS
Montgomery, Ala.

February 19, 1945.

Officers and Members,
The Medical Association of the State of Alabama
Montgomery, Alabama.

Gentlemen:

We have examined the cash account of the Treasurer of the Medical Association of the State of Alabama for the year ended December 31, 1944, and submit the following statements:

Exhibit "A"—Summary Statement of Cash Receipts and Disbursements for the year ended December 31, 1944.

Exhibit "B"—Analysis of Cash Disbursements for the year ended December 31, 1944.

Exhibit "C"—Securities Owned, December 31, 1944.

Our audit procedure included the tracing of all recorded cash receipts to the record of deposit of funds as indicated by bank statements submitted for our examination. All returned, paid, bank checks, together with their supporting vouchers, were examined as to signature and endorsement, and were vouched to the record of cash disbursements.

The balance of cash on deposit at December 31, 1944, as indicated in Exhibit "A," was verified by us.

Securities owned by the Association were examined in the Safety Deposit Vault of the First National Bank of Montgomery, Alabama, in company with Dr. Douglas L. Cannon. A schedule of these securities is submitted as Exhibit "C."

Respectfully submitted,

CRANE, HARPER & WILSON,
By H. P. Crane, C. P. A.

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SUMMARY STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1944

Exhibit "A"

Balance, January 1, 1944:

First National Bank, Montgomery, Ala.			
Checking Account	\$ 3,931.56		
Savings Account No. 27565	1,270.48	\$ 5,202.04	

Cash Receipts:

Association:			
Counsellors	\$ 940.00		
County Dues	4,027.50		
Roster of Association	4.00		
Interest on Savings Account	12.95	\$ 4,984.45	

Journal:

Advertising	\$ 5,025.27		
1944 Division of Credit	746.98		
Subscriptions	54.75	5,827.00	10,811.45
			\$16,013.49

Cash Disbursements: (Exhibit "B")

Association	\$ 6,676.53		
Journal	6,056.98	12,733.51	

Balance, December 31, 1944

\$ 3,279.98

Consisting of:

First National Bank, Montgomery, Alabama			
Checking Account	\$ 1,996.55		
Savings Account No. 27565	1,283.43	\$ 3,279.98	

ANALYSIS OF CASH DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1944

Exhibit "B"

Association:

Salary—Dr. D. L. Cannon	\$ 600.00		
Printing and Mailing Transactions—Annual Meeting	838.31		
Printing, Stationery & Office Supplies	200.91		
Postage	183.00		
Auditing	50.00		
Rental on Safety Deposit Box	6.00		
Refund of Dues	15.00		
Expense of Division and Committee Meetings	491.24		
Expense to American Medical Association	150.00		
Premium on Treasurer's Bond	50.00		
Floral Wreaths	12.75		
Expense of Annual Meeting:			
Programmes	\$ 184.13		
Lecturer	100.00		
Reporting	49.80		
Badges	45.39	379.32	

Purchase of U. S. Government War Savings Bonds—Series F	\$ 3,700.00	\$ 6,676.53	
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Journal:

Salaries:

Dr. D. L. Cannon, Managing Editor	\$ 400.00		
Dr. W. W. Wilkerson, Editorial Assistant	300.00		
Luette Kilpatrick, Clerical Assistant	550.00	1,250.00	

Printing, Addressing and Mailing Journals	\$ 4,806.98	\$ 6,056.98	
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Total Disbursements		\$12,733.51	
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THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SECURITIES OWNED AT DECEMBER 31, 1944

Exhibit "C"

	Date of Issue	Purchase Price	Redemp- tion Value		Date of Maturity	Maturity Value
			12-31-44	Increase		
20—\$500.00 Series "C" U. S. Government War Savings Bonds Numbered D459763 to D459782 inclusive	Oct. 1, 1938	\$ 7,500.00	\$ 8,600.00	\$ 1,100.00	Oct. 1, 1948	\$10,000.00
7—\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D191057 to D191063 inclusive	July 1, 1943	2,590.00	2,597.00	7.00	July 1, 1955	3,500.00
6—\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D220060 to D220065	Jan. 1, 1944	2,220.00	2,220.00		Jan. 1, 1956	3,000.00
4—\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D274010 to D274013 inclusive	June 1, 1944	1,480.00	1,480.00		June 1, 1956	2,000.00
		<u>\$13,790.00</u>	<u>\$14,897.00</u>	<u>\$ 1,107.00</u>		<u>\$18,500.00</u>

CRANE, JACKSON AND WILSON
CERTIFIED PUBLIC ACCOUNTANTS
Montgomery, Ala.

February 20, 1946.

Officers and Members,
The Medical Association of the State of Alabama,
Montgomery, Alabama.
Gentlemen:

We have examined the cash accounts of the Treasurer of The Medical Association of the State of Alabama for the year ended December 31, 1945, and submit the following statements:

Exhibit "A"—Summary Statement of Cash Receipts and Disbursements for the year ended December 31, 1945.

Exhibit "B"—Analysis of Cash Disbursements for the year ended December 31, 1945.

Exhibit "C"—Securities owned, December 31, 1945.

Our audit procedure included the tracing of all recorded cash receipts to the record of deposit

of funds as indicated by bank statements submitted for our examination. All returned, paid, bank checks, together with their supporting vouchers, were examined as to signature and endorsement, and were vouched to the record of cash disbursements. Mechanical accuracy of records was checked and proved.

The balance of cash on deposit at December 31, 1945, as indicated in Exhibit "A" was verified by direct correspondence with the depository.

Securities owned by the Association were examined by us in the safe deposit vault of the First National Bank of Montgomery, Alabama in company with Dr. Douglas L. Cannon. A schedule of these securities is submitted as Exhibit "C".

Respectfully submitted,

CRANE, JACKSON & WILSON,
By D. G. Jackson, C. P. A.

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SUMMARY STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1945

Exhibit "A"

Balance, January, 1, 1945:

First National Bank, Montgomery, Alabama	
Checking Account	\$ 1,996.55
Savings Account No. 1973 (Old Acct. No. 27565)	1,283.43 \$ 3,279.98

Cash Receipts:

Association:	
County Dues	\$ 3,727.50
Counsellors	890.00
Subscriptions	21.00
Interest on Savings Account	12.85
Roster of Association	7.00 \$ 4,658.35

Journal:

Advertising	\$ 8,588.52		
Subscriptions	34.00	8,622.52	13,280.87
			<u>\$16,560.85</u>

Cash Disbursements: (Exhibit "B")

Association	\$ 3,915.07	
Journal	6,827.41	10,742.48
<i>Balance December 31, 1945</i>		<i>\$ 5,818.37</i>
<i>Consisting of:</i>		
First National Bank, Montgomery, Alabama		
Checking Account	\$ 4,522.09	
Savings Account No. 1973	1,296.28	\$ 5,818.37

ANALYSIS OF CASH DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1945*Exhibit "B"**Association:*

Postwar Planning Commission Expenses	\$ 1,576.27	
Purchase of U. S. Government Savings Bonds	1,110.00	
Salary, Dr. D. L. Cannon	600.00	
Printing and Stationery	261.27	
Postage	157.30	
American Medical Association Meeting Expense	75.00	
Auditing Expense	50.00	
Allied Health Council, Dues and Expenses	44.25	
Southern Regional Conference Expense	15.90	
Refund of Dues	15.00	
Safe Deposit Box Rent	6.00	
Card Indexes	4.08	\$ 3,915.07

Journal:

Printing, Addressing and Mailing Journal	\$ 5,400.42	
<i>Salaries:</i>		
Dr. D. L. Cannon, Managing Editor	\$ 399.99	
Dr. W. W. Wilkerson, Editorial Asst.	300.00	
Luette Kilpatrick, Clerical Assistant	600.00	1,299.99
Cooperative Medical Advertising Bureau Meeting Expense	125.00	
Refund of Overpayment of Subscription	1.00	
Express Charge	1.00	6,827.41
Total Disbursements		\$10,742.48

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SECURITIES OWNED AT DECEMBER 31, 1945

Number	Type	Date of Issue	Purchase Price	Redemp- tion Value		Date of Maturity	Maturity Value
				12-31-45	Increase		
20—\$500.00 Series "C" U. S. Government War Savings Bonds Numbered D459763 to D459782 inclusive.		Oct. 1, 1938	\$ 7,500.00	\$ 8,700.00	\$ 1,200.00	Oct. 1, 1948	\$10,000.00
7—\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D191057 to D191063 inclusive.		July 1, 1943	2,590.00	2,639.00	49.00	July 1, 1955	3,500.00
6—\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D220060 to D220065 inclusive.		Jan. 1, 1944	2,220.00	2,235.00	15.00	Jan. 1, 1956	3,000.00
4—\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D274010 to D274013 inclusive.		June 1, 1944	1,480.00	1,490.00	10.00	June 1, 1956	2,000.00
3—\$500.00 Series "F" U. S. Government War Savings Bonds Numbered D385709F to D385711F inclusive.		May 1, 1945	1,110.00	1,110.00		May 1, 1957	1,500.00
			<u>\$14,900.00</u>	<u>\$16,174.00</u>	<u>\$ 1,274.00</u>		<u>\$20,000.00</u>

Committee of Publication

Douglas L. Cannon, Chairman

The monthly circulation of the Journal at December 31, 1945 was 1,525 copies, 1,301 of which went to members of the Association, 77 to exchanges, 57 to advertisers and advertising agents, and the remainder to non-subscribers and the files of the Association. Circulation is now showing an increase because of the return of members from service.

Receipts from advertising in the calendar year 1945 amounted to \$8,650.53. Cost of printing and distributing the Journal was \$6,752.41. Thus, the publication was more than self-sustaining, showing a profit of \$1,897.92.

In the absence of a 1945 annual meeting, there were no transactions to be published. In 1944 a total of 1400 copies was distributed to members at a cost of \$676.42.

Committee on Public Relations

Legislation in which the medical profession has an interest was supported at the 1945 session of the State Legislature. Success and failure were experienced and are recorded in the report of the Board of Censors.

Newspapers, periodicals, radio talks and pamphlets have been used extensively to acquaint the public with the attitude of organized medicine toward federal legislation regarding hospital and medical care programs as well as the interests of physicians in providing the best possible service to the people. Lectures have been given before civic clubs and other lay groups in an effort to create a better understanding between physicians and laymen. Individuals were urged to keep in mind that physicians were generally overworked and to conserve their energies by not calling them for unnecessary home visits, especially at night.

Particular attention is called to the bulletin of the Alabama Pharmaceutical Association which from time to time publishes articles designed not only to promote continued physician-druggist relations but also to sponsor good public relations. Members of the Association are urged to send to the Committee on Public Relations any information that may help promote good attitude of the public toward ethical physicians.

B. F. Austin,
Chairman
J. R. Garber

M. M. Duncan
J. O. Morgan
G. O. Segrest

Committee on Mental Hygiene

The Committee on Mental Hygiene has been rather busy and active during the war years and since the last regular meeting of this Association. War and the postwar period brought new problems to our people which demanded our immediate efforts. The problem of great numbers of young men being rejected because of psychoneurosis and other psychiatric disorders and the development of these disorders in those already inducted and then being discharged from service presented a situation which called for the en-

lightenment of laymen along these lines. Following the advice of the American Psychiatric Association, which had the approval of the War Department, we made every effort to help in preparing those at home for the return of these men. We supplied speakers for radio programs and for service club meetings, such as Rotary, Kiwanis, Exchange, Civitan, Lions and Business and Professional Women.

We have kept up our contacts with the Alabama Educational Association, the Alabama State Nurses' Association, the Alabama Society for Mental Hygiene and the Alabama Association of Welfare Workers. We have been invited to sit in with and plan with certain civic groups who looked toward the betterment of social and health conditions. We have cooperated with the Alabama Commission on Education with Respect to Alcoholism.

Through all the outlets offered, including the above mentioned, as well as P.T.A. groups, the American Association of University Women and the Federation of Womens Clubs, we have tried to keep alive the needs and opportunities of mental hygiene. A large part of our work is of necessity educational and promotional. Results may not come for years but we have labored with an enthusiasm and a sense of responsibility from which we hope we may some day derive benefits.

Much needs to be done to bring Alabama to its rightful place in the care of its mentally ill and in the prevention of mental disorders. We look to the Medical College of Alabama to provide certain leadership in this direction.

We take this opportunity to express our appreciation to all those who have cooperated with us, and beg the indulgence of the Association in any of our shortcomings.

Frank A. Kay,
Chairman

C. M. Rudolph
E. S. Sledge

Committee on Maternal and Infant Welfare

The Committee on Maternal and Infant Welfare has been inactive during the last year.

In previous reports we have always given you a brief report on the number of births in the State and the number of maternal deaths and their principal causes, with suggestions that we thought would be helpful in encouraging the downward trend in maternal and infant mortality.

During the year 1944 there were 74,962 births and 284 deaths; in 1945 there 74,385 births, with only 230 deaths, which is the lowest number of deaths recorded.

The mortality rate for the nation as a whole was 2.5 and for the State of Alabama, 3.8.

Now this reduction in maternal mortality was made with inadequate hospital facilities and a tremendous reduction in medical personnel. The number of infant deaths remains about the same; namely, in 1944, 3,331; in 1945, 3,120.

The causes of the maternal deaths have maintained the same percentage during the last few years, with infection, toxemia and hemorrhage holding the first three places.

The causes of death remain about the same. The suggestions for their prevention also remain the same as given in previous reports:

(1) Infection continues to lead the way, and yet it requires the least amount of effort to prevent; namely, cleanliness, conservatism and expectancy.

(2) Toxemia: A rigid antenatal supervision. At the first sign of trouble, immediate hospitalization and a rigid form of therapy instituted, plus conservatism, would save some lives.

(3) Hemorrhage: At the first sign of blood, match every case for transfusion, replace lost blood, and check RH factor on every mother receiving blood. Conservatism will reduce the above rate even more.

We anticipate an increase in the abortion problem during the next year due to maladjustments. We suggest preconceptual and premarital advice, as well as properly supervised dissemination of methods of conceptional control.

In the report of our Committee in 1942, we made a humble request. We would like to reiterate that request as submitted on that date.

Approximately 85% of our doctors are doing 67% of the deliveries. It has been said that obstetrics is commanding the dignity and respect that other specialties maintain. One glance at our program would cause one to have considerable doubt. It would seem that a branch of medicine that is being practiced by 85% of the doctors is entitled to, first, a section of its own; and, second, a meager representation by possibly at least one paper at a general session. There is only one way to fight maternal mortality in Alabama and that is through education. We have requested a prominent place on the program of the county, district, and State meetings from time to time to discuss problems of this nature. Now whether we have been left off the program inadvertently or intentionally is beside the point. We feel that, first, maternal mortality is worthy of more serious consideration; and, second, that there are too many men doing obstetric work in our State to treat the subject so lightly. In order that the subject of maternal mortality may be brought to the general practitioner and discussed adequately before the greatest number of men, we are requesting again that we be permitted to have a section of our own and that we receive time and publicity in keeping with the other sections. In the event the State organization continues to have sections and does not approve of our section we have no alternative but to continue to hold a separate meeting just as we are doing this year. We sincerely hope this request will meet with your approval.

We extend a cordial invitation to every man interested in obstetrics and gynecology to attend our meeting which will be held at 2:00 P. M. this afternoon and at 8:00 P. M. this evening in the WBRC Auditorium. We have a program with outstanding speakers and we are sure your time will be well spent. We are also having a luncheon at 12:30 today at the Thomas Jefferson Hotel. We will be delighted to have you present.

We hope that with the return of many doctors to the State there will be more meetings, both county and district, and that obstetric problems will share equal importance on each program.

We also hope that the State will recognize the Maternal and Child Health Bureau with an active obstetrician in charge, and that many of the prenatal clinics closed during the war will be reopened.

We would like to call attention to the post-graduate seminars being held at our medical school, and we are sure that obstetrics will command a prominent part of the program. We hope as many as possible will attend.

In conclusion we would like to submit the following recommendation:

1. That the obstetricians and gynecologists be permitted to have a program (section) of their own that runs concurrently with the State meetings.

2. That our organization receive an equal amount of time and publicity that is allowed other sections in the State Journal and elsewhere.

3. That the State of Alabama put on an all-time obstetrician to direct clinical organization and supervision.

4. We humbly request that county, district and State meetings please give us one paper each year. We will gladly furnish the speaker.

We want to thank you for the splendid co-operation we have received to date, and with return of many of our doctors and many young obstetricians joining our rank we look forward to the future with confidence.

A. E. Thomas,
Chairman

T. M. Boulware
Hughes Kennedy, Jr.

Committee on Cancer Control

During the two years that have passed since submitting the last report from this Committee, the deaths from cancer in Alabama have slightly increased from 2,087 in 1944 to 2,175 in 1945. Although cancer occupies third place among the ten highest causes of death in our State, it ranks second in the nation, and is surpassed only by cardiovascular diseases.

Cancer is a reportable disease, and every physician should include this disease among his report of patients with communicable illness, as required by law. It is encouraging, however, to note the splendid co-operation on the part of many physicians who are reporting more promptly and completely all patients as soon as the diagnosis of cancer has been made. This will be of great value to the cancer control program.

EDUCATIONAL PROGRAM

The educational efforts in cancer control by the State Medical Association during the past two years have been splendidly supplemented by the excellent work of the Field Army of Alabama. A limited number of leaflets on cancer have been distributed through the State Committee but the essential distribution of literature has been through the Field Army of the American Cancer Society. There is a very great need,

however, of authoritative literature on the cancer situation in Alabama, published by the State Health Department and distributed to every physician of the State.

It has not been possible to ascertain the exact number of programs in County Medical Societies devoted to cancer during the past two years. It is known that a large number of the counties did devote at least one meeting of the year to cancer. Through the aid of the State Medical Center, it is hoped to present the problem of cancer to every County Medical Society during the coming year.

THE FIELD ARMY

Again, it is the desire of this Committee to recognize the excellent work that has been done in our State by the Field Army of the American Cancer Society, and to pay tribute to the loyalty and full co-operation of the leadership of this organization with the Cancer Committee and State Medical Association. Through the efforts of Mrs. Ray Meade, the State Commander, every county of the State is well organized and has enlisted a veritable army of enthusiastic crusaders in the fight to save many lives from becoming victims of the disease of cancer. Every doctor has had evidence of increasing cancer consciousness throughout the State, which is the by-product of the efforts of the Field Army.

CANCER TREATMENT CLINICS

The activity of State Board of Health in regard to treatment clinics made possible by State appropriation is not a part of the report of the Committee on Cancer Control. However, the Committee feels a complete summary of the work of this department of public health will be of interest and help in the cancer program. Suffice it to say, with the State appropriation, clinics for indigent cancer patients have been functioning satisfactorily enough to justify a renewal of the State financial assistance during another two-year period.

It is appropriate to mention the fact that the first industrial detection clinic for cancer in the United States has been established at the Avondale Mills. Sylacauga, through the efforts and vision of the Alabama Field Army. No credit for this innovation is taken by the Medical Association or Cancer Control Committee, but we appreciate the value of this project.

ENLARGEMENT OF CANCER PROGRAM

There are certain suggestions, which the Committee feels are appropriate at this time, to improve the cancer program and enlarge its effectiveness.

1. It is desirable to create a separate division for cancer control in the State Department of Health, giving it individual status, with a full-time administrator and adequate clerical assistance. Statistical reviews of the work of the cancer clinics, with the results accomplished, and research into each county problem will enlarge the cancer program. The creation of a registry for cancer patients for the entire State will be

of great value. Through the division, close co-operation could be worked out between physicians, hospitals, clinics and state-aid activities.

2. The creation of a Cancer Commission, comprised of pathologist, surgeons, radiologist and internist, seems urgently needed. This could take the role of the Cancer Control Committee, or operate in conjunction with this Committee. This Commission should have closer integration with the functions of the State Health Department in policies and operations of cancer treatment clinics.

3. The fulfillment of the State program for care of terminal cancer patients, which has become a heavy burden upon social units now having this responsibility.

4. The establishment of detection clinics, with full co-operation of localities, where adequate medical services are available.

In conclusion, the Committee desires to express its great appreciation for the services of Dr. D. G. Gill, who, with many demands upon his time, has done such a good job in operating the cancer clinics in the State, through his Bureau of Preventable Diseases. Also, recognition is made of the co-operative and helpful suggestions by the State Health Officer, Dr. B. F. Austin, and the untiring efforts of Mrs. Ray Meade, State Commander of the Field Army, in behalf of cancer control in Alabama.

Karl Kesmodel
Harry Simpson

J. P. Chapman
Chairman

Committee on Postgraduate Study

The membership will probably recall that in 1943 the Committee on Postgraduate Study was relieved of its activities for the duration of the war because it was impossible to carry on the work due to shortage of instructors and limited travel facilities. Therefore, the Committee has nothing to report concerning its activities for the past year.

The Committee on Postgraduate Study was created in 1936. The courses of instruction were begun soon thereafter, using the circuit system, instruction being given by faculty members of the Tulane University of Louisiana, expenses being defrayed in part through appropriations from the Society, the State Health Department and the Commonwealth Fund.

Each year approximately 33 counties were reached with an average enrollment of 200 physicians. These courses apparently were well received.

In view of the very successful postgraduate seminar that has been sponsored by the Medical College of Alabama, wherein courses in obstetrics, gynecology, medicine, pediatrics and surgery were given, with an entire week being devoted to each of these divisions, including lectures, conferences, demonstrations and ward rounds, which will be continued and expanded upon each year, the question arises whether the Association should continue with the type of postgraduate instruction given in the past because of the probability of overlapping.

This, of course, is a matter for the Board of Censors and the Association to decide, and if it is felt that our former type of instruction should be continued, the present members of the Committee, and those having served in the past, will be equally willing to give their best efforts to a renewal of our activities in this particular.

Ralph McBurney
Chairman

G. O. Segrest
Cabot Lull

Physician-Druggist Relationships

With the 1946 session of the State Medical Association, a change in membership of this Committee is in order.

A new group taking over the work of a department is naturally interested in the viewpoint and activities of its predecessors. With this in mind, we feel that it is appropriate at this time to briefly review our efforts during the past four years.

The purpose of our Association in establishing this Committee was, we assume, to build an enduring, fruitful relationship between the two professions. From this premise, our first step was to become acquainted with representatives of the pharmacists and discuss questions involving service to the public and other questions and practices that might threaten harmonious co-operation of the two groups. The officials and committeemen of the State Pharmaceutical Association have been most helpful and cordial and we have been the recipients of many courtesies.

During the period, a number of communications on subjects of interest to doctors and druggists have been submitted to and published in our State Medical Journal which, for the information of that group, has placed the secretary of the Pharmaceutical Association on its mailing list.

For the past two years, the Jefferson County Medical Society has held annual meetings with the druggists as guests. Plans are being made for a joint barbecue this summer, the date to be announced later.

This year, the pharmacists have been invited to attend our State meeting, particularly to hear lectures and papers of peculiar interest to them as well as to us.

The following recommendations of this Committee have been approved:

The doctors' committee to include one physician from each of the larger cities of the State, consulting and working with local druggist members appointed by the Pharmaceutical Association.

That local druggists be invited to furnish County Medical Societies with at least one program a year. (A purely social affair, such as a joint barbecue, might be held instead.)

The Alabama Pharmaceutical Association, by request, to furnish an essayist from year to year to be given a place on our annual program. We feel that this would make for closer co-operation and at the same time bring information on the subject of pharmaceuticals, adding to and rounding out the educational function of our meetings.

The following recommendation is submitted:

Since committees change from time to time, we feel that the work of those just assuming such duties would be simplified and rendered more effective should there be readily available to them information regarding what has been done in the past. We recommend, therefore, that clippings from the Journal of the Committee's activities be filed in the Secretary's office and loaned to incoming chairmen when assuming duties.

R. E. Cloud,
Chairman

Seale Harris
W. M. Salter

Postwar Planning Commission

M. S. Davie, Chairman

Our Commission has taken its work seriously and has tried to render service. We found American Medicine much confused in many ways, and the Chairman wrote authoritative sources for information and available literature, asking that 10 pieces of everything be mailed to our Montgomery headquarters and distributed to the Commission from there. Meanwhile, the members had been requested to study this literature and write a digest of the same, together with their conclusions and recommendations and bring this to our next meeting, to be read from manuscripts by each in turn before any discussion was had. This procedure of manuscript reading before discussion was followed at all meetings. It required that things be thought out in advance, presented with brevity, and saved much time. A court reporter took down everything and our Montgomery office sent each of us a mimeographed copy.

At our second meeting it was decided that some of us should immediately go to our various centres of thought and activity in matters of chief interest and concern to us and make personal studies and contacts.

Dr. B. F. Austin went to Detroit to study the Michigan Plan and to get the opinions and conclusions of the thinkers there about their organization not only, but their investigations and judgment about the situation of these things as a whole in our country.

Dr. Douglas L. Cannon went to Chicago to consult the Secretariat of the AMA as to the record of success and failure of all efforts made in this country relative to our problems; such as political medicine, public opinion, action taken here and there, the success or failure of this and that and, also, their record of the beginning and evolution of the California Plan.

Drs. Carl A. Grote and B. W. McNease went together to Washington for such information as might be obtainable there, particularly that litigation which was had against us as being an organization in restraint of trade; and from there on to Wilmington to study the Delaware Plan and converse with the major personalities responsible for the launching and operation of the same. Then on to New York City to check through the Academy of Medicine there and see what was doing particularly as to the LaGuardia Plan.

By making these geopolitical studies and taking these soundings in all points of the compass, we found that certain ideas of social consciousness, wise and otherwise, were gaining headway and becoming the political football of agitators and dogooders of every type. The trinity of health, sickness and disease is a social problem. So is life. But the responsibility of blue-printing this trinity belongs to medicine.

We found that the politicians of our land were promising the people hospital and sickness protection under federal and state control which meant the end of scientific medicine until the people could be reoriented and brought to correct this tragedy.

So we set out to give the people of Alabama a hospital system which would protect the needs of everyone without federal or state control, and a voluntary prepayment hospital and sickness insurance organization which would meet all requirements. We appointed two subcommittees from our Commission to go before our Legislature on this mission. 1. Hospital Legislation: Dr. B. F. Austin, Chairman, and associate members, Drs. W. Hill McCaslan and J. O. Morgan. 2. Legislation Relating to Medical Care, Dr. C. A. Grote, Chairman, and associate members, Drs. B. W. McNease and J. Paul Jones. Under their wise and laborious leadership we have our Alabama Hospital Act and our Voluntary Prepayment Hospital and Sickness Insurance Association which is prepared to issue any type of coverage desired in this connection.

So much for so far. We realize that this fight is just beginning and that these major achievements cannot be carried to success without the integrated team-work of every member of our profession. There are many good one-mile sprinters, but only those who can keep going can keep up the score.

Sparks—Partlow Portrait Fund

H. B. Searcy, Chairman

Physicians of Alabama and friends contributed \$2558 for portraits of the Honorable Chauncey Sparks, Governor of Alabama, and William D. Partlow, M. D., to be presented to the Medical College of Alabama in appreciation of their outstanding work toward procuring the College. The portrait of the Governor was painted by Mr. Milner Benedict, Atlanta; and that of Dr. Partlow by Mr. John Clay Parker, New Orleans.

Presentation of the portraits is scheduled for noon tomorrow (Wednesday, April 17) in this room, and not in the auditorium of Hillman Hospital as indicated in the printed program.

The portraits will be accepted for the University by its President, Dr. Raymond R. Paty; and for the Medical College of Alabama, by its Dean, Dr. Roy R. Kracke.

Miscellaneous Business

Appeals filed by members of the Mobile County Medical Society in behalf of physicians denied membership in the Society

were read by the Secretary to the Association and referred by President Scott without discussion to the State Board of Censors. Action of the Association on the appeals constitutes a part of the Board's report.

Introduced also and referred to the Board were resolutions sent up by the Morgan County Medical Society relating to salaries of health department employees; and by Drs. A. A. Walker and B. W. McNease concerning federal legislation pertaining to the medical care of the American people; a communication from the Woman's Auxiliary asking the Association to support the Auxiliary's President and President-Elect in their efforts to organize units in counties where none exists; and one from Dr. Clifford L. Lamar, State Chairman of the American Academy of Pediatrics, asking approval of the Academy's plan to make a survey of pediatric needs and facilities.

Action on these resolutions and communications constitutes a part of the report of the State Board of Censors.

Afternoon Session, Tuesday, April 16

2:00 P. M.

SECTION ON SURGERY

James M. Mason, Sr., Birmingham, Chairman
Charles J. Donald, Birmingham, Secretary

Dr. French Craddock, Jr., Sylacauga, read a paper on Volvulus of the Small Intestine, of which he and his father were joint authors. It was discussed by Dr. T. Brannon Hubbard of Montgomery.

Dr. Charles M. Goss, Professor of Anatomy, Medical College of Alabama, presented a paper on Fascial Spaces and Compartments.

Dr. T. Brannon Hubbard, Montgomery, dealt with the Closure of Abdominal Incisions, and his paper was discussed by Drs. E. V. Caldwell, Huntsville, and W. F. Harper, Selma.

Dr. J. O. Morgan, Gadsden, read a paper on Sarcoma of the Gastrointestinal Tract which was discussed by Dr. Karl F. Kesmodel, Birmingham.

Dr. J. Henry Goode, Tuscaloosa, discussed Some Common Urological Complications Following Abdominal Surgery, and the discussion was engaged in by Drs. J. U. Reaves, Mobile, and Courtney Shropshire, Birmingham.

SECTION ON PEDIATRICS

J. C. Chapman, Birmingham, Chairman
W. A. Clyde, Birmingham, Secretary

Dr. J. H. Baumhauer, Mobile, presented a paper on Recent Advances in the Management of Rheumatic Heart Disease in Children which was discussed by Dr. W. R. Britton, Montgomery.

Dr. W. A. Daniel, Jr., Montgomery, read a paper on Pediatric Problems in General Practice, and the paper was discussed by Dr. J. Mac Bell, Mobile.

Dr. Beach Chenoweth, Birmingham, discussed the Epidemiology of Streptococcus Infections, and Dr. A. C. Gipson, Gadsden, participated in the discussion.

Dr. C. K. Pitt, Decatur, read a paper on The Treatment of Pertussis which was discussed by Dr. Hughes Kennedy, Birmingham.

Drs. John Simpson and W. S. Littlejohn, Birmingham, presented a paper on the Management and Re-Education of the Spastic Child, and the paper was discussed by Dr. A. A. Walker, Birmingham.

Evening Session, Tuesday, April 16

8:00 P. M.

SECTION ON MEDICINE

James S. McLester, Birmingham, Chairman
Ivan Berrey, Birmingham, Secretary

Dr. E. G. Givhan, Jr. and Dr. J. B. McLester, Birmingham, discussed Malaria in the Pacific and in the Mediterranean Theatre, and Dr. E. Julian Hodges, Scottsboro, participated in the discussion.

Dr. J. O. Finney, Gadsden, read a paper on Rheumatoid Diseases which was discussed by Drs. E. Dice Lineberry, Ivan Berrey, and J. S. McLester, Birmingham; and by Dr. William Wilkerson, Montgomery.

Dr. J. M. Barnes, Montgomery, presented a paper on Amebiasis in the India-Burma Theatre.

Dr. W. S. Littlejohn, Birmingham, read a paper on the War Psychoses, which was discussed by Dr. William Wilkerson, Montgomery.

SECTION ON EYE, EAR, NOSE AND THROAT

E. W. Rucker, Birmingham, Chairman
L. T. Kincannon, Birmingham, Secretary

5:00 to 6:30 P. M.

Cocktail Party

(As guests of the Birmingham E. E. N. and T. Society)

8:00 P. M.

Dr. J. Brown Farrior, Ochsner Clinic, New Orleans, gave A Critical Analysis of the Fenestration Operation.

Capt. Alston Callahan, U. S. A. M. C., Northington General Hospital, Tuscaloosa, read a paper on Plastic Surgery of the Lids.

Maj. Fred T. Becker, U. S. A. M. C., Kennedy General Hospital, Memphis, discussed Cutaneous Eruptions Frequently Seen in E. E. N. and T. Practice.

Second Day, Wednesday, April 17

9:00 A. M.

GENERAL SESSION

President Scott, Presiding

Dr. D. S. Reese, Carrollton, was recognized as Georgia's fraternal delegate.

Dr. James M. Mason III read a paper on Surgery of the Colon—Traumatic and Elective.

Dr. Lawson Thornton, Atlanta, presented a paper on Injuries to the Hip.

Col. James Barrett Brown, U. S. A. M. C., Valley Forge General Hospital, Phoenixville, New Orleans, gave an illustrated lecture on Military Plastic Surgery.

Dr. Champ Lyons, Ochsner Clinic, New Orleans, discussed Chronic Shock—Its Diagnosis and Treatment.

The Jerome Cochran Lecture was delivered by Dr. Alton Ochsner, Tulane University School of Medicine, New Orleans, on the subject The Significance of Incidental Observations in the Progress of Medicine.

Miscellaneous Business

The Secretary of the Association announced vacancies as follows in the College of Counsellors:

2nd Congressional District—2: The first terms of N. W. Killingsworth and H. W. Waters expire with this meeting.

3rd Congressional District—2: F. H. Boyd's first term expires with this meeting. Dr. W. A. Lewis is deceased.

4th Congressional District—3: F. H. Craddock's second term expires with this meeting as does Marcus Skinner's first term. Jerre Watson's first term expired in 1945.

5th Congressional District—2: The first terms of J. O. Morgan and C. E. Ford expire with this meeting.

6th Congressional District—1: C. E. Abbott's first term expired in 1945.

7th Congressional District—6: The first terms of J. G. Daves and Merle Smith expired in 1945; those of L. C. Davis and R. Lee Hill expire with

this meeting. D. H. Wright's second term expires with this meeting. R. H. Redden is to be elevated to Life Counsellor.

8th Congressional District—2: H. M. Simpson's first term expired in 1945. W. R. Taylor is to be elevated to Life Counsellor.

9th Congressional District—6: C. O. King's first term expired in 1945. John D. Sherrill's first term expires with this meeting, as does the second term of J. R. Garber and D. S. Moore, Jr. S. L. Ledbetter, Jr. and G. F. Walsh are deceased.

Counsellors and delegates from these districts were called to meet in the Ballroom of the Thomas Jefferson Hotel at 7:30 P. M., April 17, for the purpose of making nominations to fill these vacancies.

Wednesday, April 17

12:00 Noon

Harvey B. Searcy, Presiding

Portraits of Governor Chauncey Sparks and Dr. William Dempsey Partlow were given by the Association to the Medical College of Alabama in appreciation of their outstanding work in procuring the College. The portrait of the Governor, painted by Mr. Milner Benedict, Atlanta, was presented by Dr. W. M. Salter, Anniston; and that of Dr. Partlow (artist: Mr. John Clay Parker, New Orleans) by Dr. Seale Harris, Birmingham. The portraits were accepted by Dr. Raymond R. Paty, President of the University of Alabama on behalf of the University; and by Dr. Roy R. Kracke, Dean of the Medical College of Alabama, for the College.

Governor Sparks and Dr. Partlow addressed the Association.

Afternoon Session, Wednesday, April 17

2:00 P. M.

GENERAL SESSION

Dr. Edgar Burns, Ochsner Clinic, New Orleans, read a paper on the Clinical Importance of Congenital Anomalies of the Urinary Tract which was discussed by Dr. J. W. Davis, Jr., Montgomery.

Drs. Seale Harris and Leon S. Smelo, Birmingham, gave a case Report of Diabetes Mellitus and Hyperinsulinism of Pituitary Origin which was discussed by Dr. Willena Peck, Montevallo.

Dr. Walter Haynes, Birmingham, presented a paper on the Early Diagnosis of Brain Tumor which was discussed by Dr. Garber Galbraith, Birmingham.

Dr. Roy R. Kracke, Dean of The Medical College of Alabama, Birmingham, discussed The Role of the Medical College in Alabama Medicine.

Dr. Gilbert Fisher, Birmingham, read a paper on Prevention of Deafness which was discussed by Dr. Harvey B. Searcy, Tuscaloosa.

Evening Session, Wednesday, April 17

8:00 P. M.

POSTWAR PLANNING

M. S. Davie, Dothan, Presiding

Alabama Hospitals was the subject of Dr. B. F. Austin's contribution to the discussion of Alabama's Postwar Planning.

Dr. Carl A. Grote, Huntsville, read a paper on Volunteer Prepayment Insurance.

Dr. M. S. Davie used The Situation for his theme.

Mr. M. H. Peterson, National Physicians Committee for the Extension of Medical Service, Chicago, spoke on the Implications of Pending Federal Legislation Relating to Medical Care.

(The proceedings of the last day's session will appear in the June Journal.)

Coronary Artery Disease—Observation of cardiac patients of military age justifies emphasis upon the fact that coronary artery disease may manifest itself as an atypical clinical picture. Ten illustrative cases are here described. Not only may the pain be mild in character, unusual in location and brief in duration, but pain may be absent altogether, and the sudden onset of cardiac arrhythmia or of cardiac insufficiency may herald a coronary accident.

Since electrocardiographic changes may be late in appearance, relatively transient, and often minor in single tracings, serial electrocardiographic study is important. In all cases, however, the clinical picture is most important, and one should maintain a high index of suspicion despite an initially normal electrocardiogram. Conversely, when routine electrocardiographic study in an apparently normal young person is suggestive of coronary artery disease, one should inquire into the past history most carefully before concluding that the "range of normal electrocardiographic findings" should be widened.

Finally, one has reason to expect that further studies upon younger persons, with wider use of electrocardiography, will disclose coronary artery disease to be more frequent, and the ultimate prognosis better than is now indicated by observations upon older age groups.—Scherlis, *Virginia M. Monthly*, Apr. '46.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

B. F. Austin, M. D.
State Health Officer

THE ATOMIC BOMB

In late June 1940, Hitler had just made himself the undisputed master of Western Europe, England appeared to be facing immediate invasion and defeat, and Japan was having things pretty much her own way in China. At that time a member of the staff of the State Department of Health happened to get into a day-coach conversation with a soldier who had recently arrived on the mainland after a long period of service in the Hawaiian Islands. The health worker, like most Americans, was gravely concerned over the disastrous turn of events in Europe and expressed his fears to his new acquaintance. But that young soldier was not particularly downhearted. For, he said, he happened to know that the U. S. War Department had developed, or at least was working on, a bomb so powerful as to revolutionize the whole art of warfare. Only one of the new bombs, dropped on a city the size of Montgomery, would destroy it completely, he explained. That, he added, was why he was not worried about this country's being defeated by Hitler or anyone else.

In a short time that train trip ended, and these two—the soldier and the public health worker—bade each other good-bye. They have not seen each other since.

Possibly the soldier was merely talking to make conversation or to impress his new acquaintance with his supposed knowledge of the "inside" of the War Department's activities. Perhaps he knew nothing at all about a revolutionary bomb that would virtually place 1940 fighting machines in the same class as the bow and arrow or the muskets that made history at Lexington and Bunker Hill. If he had such knowledge, he certainly was indiscreet to the point of treason to mention it to a person he had known less than an hour. But be that as it may. It is a matter of historic record, however, that slightly more than five years later—on August 6, 1945—a young major of the

U. S. Army Air Forces flew over the city of Hiroshima, Japan, and dropped a new bomb which did exactly what that indiscreet—or prevaricating—soldier said would be done by the bomb he was describing. A few days later a second atomic bomb fell on Nagasaki with equally devastating results.

The immediate effect of those bombs was virtually to destroy two cities each several times as large as Montgomery. An effect almost as immediate was to convince the Japanese government that it could not hope to win the war against an enemy armed with such destructive force, or indeed survive such widespread destruction more than a few weeks. So the war came to a suddenly victorious end, and soon young men and women wearing fresh gold-eagle buttons began appearing in increasing numbers upon the streets and highways of our land.

Less than two weeks after the momentous surrender ceremony on the decks of the "mighty Mo" in Tokyo Bay the U. S. S. *Wichita* steamed into the port of Nagasaki. On board was a group of scientists eager to find answers to many medical questions which had arisen in this newly arrived atomic age. Their primary task was to find out what physical changes had been produced in the men, women and children who had escaped death during the atom bomb raid.

The investigations were conducted at the Chinkozen Primary School, which the Japanese had been using as a hospital since the destruction of the Kyushu University hospital and medical school. The scientists in charge welcomed the assistance of the Japanese physicians already there, not only because the work could be done more effectively with more people engaged in it but also and particularly because the knowledge these Japanese medical men had acquired before the Americans' arrival was extremely valuable. The work suffered a set-back when the *Wichita* was ordered to sail to another port, but it was not abandoned. The scientists who were left behind continued their observations.

The results of those studies of atomic sickness were described in a recent issue of the

U.S. Naval Medical Bulletin, official publication of the Bureau of Medicine and Surgery of the Navy Department. The article, titled "Radiation Sickness in Nagasaki, Preliminary Report," was written by Joseph J. Timmes, Commander (MC), U. S. N.

"When the atomic bomb exploded," he wrote, "the concentrated energy diffused itself in three main channels; namely, pressure, heat, and radiation. The effects of the atomic bomb differ from the ordinary explosive bomb only in its release of radiant energy. The atomic splitting bomb dropped on Nagasaki was exploded at an estimated altitude of 800 feet. At this height much of the radiant energy was expended into the atmosphere with the probably anticipated result that the underlying terrain would not remain radioactive for a prolonged period. In contrast, the New Mexico test bomb, exploding only 100 feet above the ground, caused the earth in the surrounding area to contain radioactive materials for months after the explosion. The effects produced by the atomic bomb on human beings, due to excessive pressure and heat, differ in no way from those of the ordinary bomb. However, the release of radiant energy is something new in modern warfare and consequently opens a new field in military medicine."

Naturally, those who developed the bomb could not be certain that radiant energy would not be generated, and one of the questions of greatest interest to the scientists arriving on the *Wichita* was whether such energy, if developed, still remained in the area and in the bodies of those who had survived the bombing. To obtain an answer to this question Commander Timmes and his fellows buried x-ray films in the bombed area and attached them also to objects found in the so-called crater created by the explosion. (Commander Timmes assures us that a true crater does not exist.) These x-rays were carefully studied but failed to reveal the presence of radioactive elements. Some time later other investigators, employing another procedure (Geiger point counters), reported that they too had been unable to find any evidence of more than negligible amounts of radiation and declared the area safe. Then x-ray plates were affixed to the limbs of hospital patients who had been injured in the atom bomb explosion and were kept there for 18 hours. The results

of those experiments were equally negative, as far as radiation was concerned. The author suggested in explanation that, although these patients had been exposed to radiant energy, they had failed to absorb any of it in substantial amounts.

But those patients gave other evidence of injury from the atom bomb explosion. Commander Timmes explained it as follows:

"The patients examined revealed true forms of radiation sickness which were similar to the acquired or experimentally produced cases seen in the United States. The Japanese claimed that during the first week most of the deaths were the result of radiation sickness; however, they did not differentiate blast victims from radiation patients. They also attributed to radiation many thermal burns. It can be assumed, however, that a large percentage of the early victims died of radiation effect. The striking force consisted of two aircraft, and when the bomb was dropped most of the civilians were not in air-raid shelters. This is explained by the fact that the Japanese were not accustomed to sound 'air alert' for a supposed 'small' raid. The air-raid shelters probably would have afforded adequate protection had they been constructed of concrete about two feet in thickness.

"All of the victims seen came from the same local area. No patient was found who had been beyond three kilometers from the center of the explosion area.

"Only a few cases which could be classified as x-ray skin burns were noted. Differentiation from a thermal burn is difficult, particularly with a number of flash burns present, but when the burns appeared four or five days after the explosion and without apparent cause, it was assumed that they were of radiation effect. The few x-ray burns observed were mild in character."

You may have seen one or more of the newspaper pictures of persons who had lost all or most of their hair as a result of the bombing. This condition is known in medical terms as alopecia and of course is not confined to the victims of atomic bombing. Some of the residents of Nagasaki began losing their hair within four or five days after the atomic bomb fell, but it was not until about the third week after the bombing that others did so. Commander Timmes

commented upon the fact that none of the cases included in his study involved complete baldness, and at the end of a month a few of those who had been rendered partly bald had begun to grow more hair, described as "of a downy nature." Whether all the lost hair would eventually be replaced was characterized as a matter of uncertainty.

The radiation also had a marked effect upon the bone marrow of those who felt its power. Of this the author wrote:

"The principal effect of the radiation was on the bone marrow, with a marked degree of depression of the marrow function. Most of the cases seen showed an aplastic type of anemia. The blood was deficient in red blood cells and hemoglobin, but was not markedly hypochromic (or deficient in coloring) . . . A number of white blood cell counts under 1,000 were seen and in some cases the white blood cells completely disappeared before death. A white blood cell count under 1,000 offered a poor prognosis; however, one patient with 400 cells per cu. mm. recovered . . . Petechiae were commonly seen, as were gross hemorrhages. Bleeding times were increased and often were found to be prolonged over 45 minutes. Jaundice was not seen, but all of the patients showed a marked degree of pallor of the mucuous membranes. The liver was found slightly enlarged in only one case, and the spleen was not enlarged in any case. Urinalysis frequently revealed albumin, casts, bile and red blood cells."

Upon admittance to the improvised hospital the average patient complained of fever, malaise, loss of appetite, bleeding gingivae and hemorrhagic diarrhea. Those small spots caused by blood effusions which have already been mentioned were found on wide areas of the victims' bodies, and buccal lesions were also found in the average patient undergoing examination.

Other medically interesting effects of the atomic bombing which the author listed included glossy, smooth tongues, with ulcerative lesions of the mucuous membranes. These bled easily, were often found to be grossly infected and showed no tendency to heal. The teeth were usually loose, so loose, in fact, that they could be removed with the fingers. Some of the cases were characterized by excessive salivation. One of those participating in the studies reported

that some of the gold removed from these victims' teeth contained radiant energy. A large number of the patients succumbed quickly to infection of various kinds, being particularly susceptible to bronchopneumonia. In general, the younger victims responded to treatment better than their elders.

Needless to say, the medical profession and the general public will watch with much interest for the results of further studies of the effects of atomic bombing upon the functioning of the human body, for many new problems in medicine also had their beginning August 6, 1945.

BUREAU OF LABORATORIES

H. P. Sawyer, M. D., Director

SPECIMENS EXAMINED

FEBRUARY 1946

Examinations for diphtheria bacilli and Vincent's	607
Agglutination tests (typhoid, Brill's, undulant fever)	638
Typhoid cultures (blood, feces and urine)	625
Examinations for malaria	628
Examinations for intestinal parasites	2,044
Serologic tests for syphilis (blood and spinal fluid)	29,479
Darkfield examinations	47
Examinations for gonococci	3,799
Examinations for tubercle bacilli	1,912
Examinations for meningococci	9
Examinations for Negri bodies (microscopic)	127
Water examinations	1,080
Milk examinations	2,247
Miscellaneous	539
Total	43,781

BUREAU OF MATERNAL AND CHILD HEALTH

J. S. Hough, M. D., Acting Director

EMERGENCY MATERNITY AND INFANT CARE PROGRAM

REVISED POLICIES

WHO IS ELIGIBLE

1. Any wife of a serviceman who, during the pregnancy of his wife, is in the 4th, 5th, 6th or 7th pay grade of the U. S. Army, Navy, Marine Corps, Coast Guard, or is an aviation cadet.

2. Any infant under one year of age of a serviceman who, during the prenatal life

of his infant or first year of life of his infant, is in the 4th, 5th, 6th or 7th pay grade of the U. S. Army, Navy, Marine Corps, Coast Guard, or is an *aviation cadet*.

3. Also eligible is the wife or infant of a serviceman who is deceased in service or missing in action or who is promoted or honorably discharged on or after January 1, 1945, but who was in one of the four lower pay grades at some time during the pregnancy of his wife or first year of life of his infant.

CARE PROVIDED

For the wife: Under this program an eligible woman may receive physician's and hospital services for maternity care during the prenatal, confinement, and six-weeks postpartum periods, including care of complications and routine care of the newborn infant during the first two weeks of life. Care of the maternity case ordinarily ends with the postpartum discharge examination given about six weeks after confinement; however, continuing care of serious, acute maternity complications beyond the six-weeks postpartum is provided.

For the infants Under this program an eligible infant may receive physician's and hospital services for care of sickness and for immunizations against whooping cough during the first year of life. *Well-baby care beyond the first two weeks of life, except for immunization, is not provided.*

Note: The program does not duplicate existing services for care of crippled children; therefore applications for such care should be sent to the county Crippled Children's Service. Examinations for diagnosis and any necessary interim medical care can be provided under the EMIC program.

Other services: Special duty nursing services can be provided for care of the patient during critical periods of serious illness or to provide nursing care at home confinements during delivery and the immediate postpartum period. All patients are referred to local public health nursing services for educational visits.

When necessary, services of blood donors, of ambulance companies or of other vendors of unusual and exceptionally expensive supplementary services can be provided.

The Bureau of Maternal and Child Health provides advice and guidance for patients

needing help with social problems. Actual assistance is obtained through established welfare agencies.

HOW TO APPLY

Applications should be submitted as soon as care is needed. The physician should verify the serviceman's military status by asking the wife to show recently dated evidence of rank or rating on a letter from the husband, allowance card or other official communication. Data on discharge or promotion are not shown on allowance cards or envelopes from husband.

All data requested on the application must be filled in or approval will be delayed. Completed application should be mailed promptly to Bureau of Maternal and Child Health, State Department of Health, Montgomery 4, Alabama. If necessary information is temporarily lacking, send application immediately and transmit the additional information as soon as possible.

AUTHORIZATION POLICIES

Maternity care applications can be accepted without question up to date of delivery and payment authorized for care beginning on a prenatal date as requested by physician and patient. Applications for other services can be accepted without question if received within three weeks of the date of beginning of care as requested by physician and patient. Late applications can be accepted only if accompanied by information giving valid reason for late submittal. New applications must be submitted for each individual illness of infants, including newborn infants requiring continued hospital care after the mother is discharged. A new application should be submitted whenever the patient changes physicians. All care must be requested and authorization must be given if payment is to be made. Request for additional services not listed on initial application should be made at the time the need arises.

Other factors determining eligibility: No payment may be made by patient or someone in her behalf for care authorized by the State Department of Health. A patient must receive both attending physician's services and hospital care under this program (if hospital care is planned). Hospital care is ordinarily provided in minimum rate accommodations. *Patients may not pay addi-*

tional to receive private room accommodations. Under this program payment can be made only when the care is given by practitioners and in institutions meeting the established qualifications. Licensed practitioners have been given detailed information on these qualifications for guidance in requesting additional services. For example: medical consultation and major surgical care can be provided only when given by a physician qualifying as a consultant. Special duty nursing care can be provided only when given by a registered graduate nurse.

PAYMENTS

All payments are made directly to the physician, hospital, nurse, or other vendor of service. Payments cannot be made to the patient.

BUREAU OF PREVENTABLE DISEASES

D. G. Gill, M. D., Director

CURRENT MORBIDITY STATISTICS

	Jan.	Feb.	E. E.* Feb.
Typhoid	1	3	6
Typhus	33	20	15
Malaria	97	149	49
Smallpox	2	1	1
Measles	55	486	550
Scarlet fever	55	62	76
Whooping cough	84	62	83
Diphtheria	21	33	37
Influenza	7278	2151	1313
Mumps	105	191	206
Poliomyelitis	1	2	2
Encephalitis	0	1	1
Chickenpox	132	99	163
Tetanus	4	2	2
Tuberculosis	184	241	214
Pellagra	1	2	11
Meningitis	21	13	18
Pneumonia	508	525	632
Syphilis	781	1092	1424
Chancroid	8	8	9
Gonorrhea	899	973	338
Ophthalmia	0	0	0
Trachoma	0	0	0
Tularemia	0	1	2
Undulant fever	3	6	2
Dengue	0	0	0
Amebic dysentery	3	2	0
Cancer	214	227	0
Rabies—Human cases	0	0	0
Positive animal heads	45	79	

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

Chronic Disease—In the light of the current emphasis on the construction of coordinated hospital and health center facilities and the very real prospect of national and state legislation and planning, it certainly is urgent that the needs of the chronically ill be kept in mind. It is equally urgent that those planning for the care of the chronically ill, if they happen to be a jump ahead of the state master plan, make their plans adaptable to the fundamental future pattern. —Rogers, *Am. J. Pub. Health*, Apr. '46.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

MORTALITY STATISTICS FOR 1943-1945

A comparison of Alabama mortality statistics for the year 1945 with those for the years 1943 and 1944 reflect another successful year in public health. The provisional death rate for 1945 is 8.7 deaths per each 1,000 of total population. This rate continues the downward trend as shown by the rates of 9.2 in 1943 and 9.0 in 1944. The final death rate for 1945 will probably be higher when the complete tabulation is made but there is little likelihood that final figures will result in a significant increase in the rate.

Deaths from cancer as a cause show a substantial increase over the preceding years of 1943 and 1944. The steadily increasing number may in part be attributed to the increased number of cancer cases becoming known and diagnosed as such. Thus a trend of increasing numbers of deaths caused by cancer may be more apparent than real.

Pneumonia as a cause of death continued to lose importance by dropping nearly 13 percent from the 1944 rate. The puerperal death rate of 30.7 shows a significant drop from the rates for the preceding two years.

Deaths resulting from motor vehicles increased in number in 1945 with the highest rate in three years. Undoubtedly this rising trend will continue as motor vehicles return to the prewar level of mileage traveled and high speed. It is encouraging, however, to note the continued decreases in the death rate from accidents exclusive of those involving motor vehicles.

The importance of "querying" causes of death which are found to be incomplete and unsatisfactory for statistical reasons cannot be stressed too much. The response of physicians to queries is most satisfactory. This clearly reveals their professional interest in reliable statistics. During the year 1945 a total of 1955 replies to queries on the cause of death given on the death certificates enabled the Bureau to classify the cause of death more precisely. Evidence of more complete and reliable mortality statistics may be seen by observing the decreasing number of causes of death that must be placed in the category of ill-defined and unknown causes.

Another factor of great importance in improving the reliability of mortality statistics is that of complete reporting. Rates are not reliable measures of the causes of death if all mortalities are not recorded for the population within which the mortalities occur. Every effort must be exerted to attain complete reporting of mortalities. This goal will have been reached only when a death certificate is filled which clearly defines the cause of death for each mortality that occurs within our state boundaries.

MORTALITY STATISTICS FOR 1943-1945

	Number of Deaths, 1945 (Provisional)—Total	Annual Rate* Per 100,000 Population		
		1945	1944	1943
Births (exclusive of stillbirths)	72680	25.1	25.6	27.1
Stillbirths	2282	30.4	28.8	29.6
Deaths (exclusive of stillbirths)	25039	8.7	9.0	9.2
Infant deaths: Under one year	3120	42.9	45.7	44.4
Under one month	1945	26.8	27.1	26.0
Typhoid and paratyphoid fever 1, 2	18	0.6	0.6	0.5
Cerebrospinal meningitis 6	59	2.0	2.8	2.1
Scarlet fever 8			0.1	0.1
Whooping cough 9	85	2.9	3.1	4.8
Diphtheria 10	57	2.0	2.0	1.5
Tuberculosis, all forms 13-22	1161	40.1	42.8	45.2
Malaria 28	35	1.2	1.4	2.1
Syphilis 30	363	12.5	14.6	12.2
Influenza 33	405	14.0	21.5	21.7
Measles 35	4	0.1	3.0	0.7
Poliomyelitis 36	22	0.8	0.4	0.3
Encephalitis 37	18	0.6	0.6	0.2
Typhus fever 39	38	1.3	1.6	0.9
Cancer, all forms 45-55	2173	75.1	72.1	64.1
Diabetes mellitus 61	356	12.3	11.3	12.1
Pellagra 69	98	3.4	3.5	4.8
Alcoholism 77	23	0.8	1.1	0.8
Intracranial lesions 83	2397	82.8	82.5	79.4
Diseases of the heart 90-95	5120	176.9	177.0	176.3
Diseases of the arteries 96-99	280	9.7	9.0	10.1
Bronchitis 106	43	1.5	1.4	1.6
Pneumonia, all forms 107-109	1258	43.5	49.9	54.6
Diarrhea and enteritis (under 2 years) 119	252	8.7	10.2	8.9
Diarrhea and enteritis (2 and over) 120	65	2.2	2.9	2.6
Appendicitis 121	165	5.7	6.0	6.6
Hernia, intestinal obstruction 122	200	6.9	6.0	6.9
Cirrhosis of the liver 124	106	3.7	4.1	4.6
Nephritis, all forms 130-132	2064	71.3	76.1	72.1
Diseases of the puerperal state 140-150	230	30.7	37.2	37.1
Puerperal septicemia 140, 142a, 147	75	10.0	11.7	10.0
Suicide 163-164	167	5.8	5.1	5.4
Homicide 165-168	331	11.4	11.4	10.6
Accidental deaths (exclusive of motor vehicle)	1252	43.3	46.5	50.8
Motor vehicle 206, 208, 210, 211	603	20.8	18.0	16.3
All other known causes	3942	136.2	132.4	133.1
Ill-defined and unknown causes 199-200	1648	56.9	60.0	80.3

*Birth and death rates per 1,000 population; infant death rate per 1,000 live births; stillbirths per 1,000 total births (inclusive of stillbirths); from specific cause per 100,000 population; from puerperal causes per 10,000 total births.

State total population used as basis for rates—2,893,979—was estimated as of July 1, 1943.

War Medicine in Europe—Undoubtedly the greatest single advance in the treatment of the battle casualty in World War II as compared to World War I was in the best resuscitation of the patient in shock. The vast majority of fatal battle casualties die either of shock or of hemorrhage or of a combination of both. The loss of blood is frequently considerable. Studies of blood volume made in our forward hospitals in Europe indicated that the more seriously injured average the loss of at least one-third of their total blood volume. In many cases, and this is most important, the greatest loss of blood was internal and could not be detected by casual observation. One of our British colleagues states that an increase in the diameter of the male thigh of only 2 centimeters, which might be overlooked in a cursory glance, may mean that 1,500 cc. of blood are outside of the capillary bed and actually beyond the vascular tree, extravasated within the tissues of the thigh. This is most important because, in severe injuries to lower extremities such as frequently occurred from land mines, as much as 3,000 cc. of blood could be lost within the tissues of both legs without more than a few drops actually leaving the body.

The liberal use of whole blood saved thousands of lives, but it also took a heavy toll of a very few lives. Our best information now is that about 4.8 per cent of transfusions were followed by some kind of reaction. Of these, approximately 0.9 per cent were allergic reactions, 3.7 per cent were pyrogenic reactions, and 0.1 per cent hemolytic reactions. There was a very, very small number of cases in which we felt that blood produced fatal reactions. These reactions were due to either obscure subgroups in the "O" group of blood, or to the "Rh" factor. Curiously enough, initial transfusions rarely produced reaction. Later transfusions, particularly those given after a few days, sometimes showed the patient to have been sensitized by the earlier transfusions.

Another improvement in technic, which was involved in the lower case fatality, was in the field of anesthesia. More expert anesthetists were available from civil life than in the first World War, and we conducted extensive schools of training in anesthesia before the invasion. The newer anesthetics also helped. The anesthetic of selection varied with the type of case and the location of the hospital. Because a large percentage of the nontransportable casualties were wounds of the thorax, inhalation anesthesia was used most commonly in the Field Hospitals at the front. Our experience was that regional anesthesia is not the anesthesia of choice where wounds had to be generously debrided and much tissue excised. The amount of debridement required rarely can be estimated accurately until the surgeon has thoroughly explored the wound; and the extent of regional anesthesia required can, therefore, rarely be predicted before the operation. When used for this type of case, it tended to restrict the surgeon to the disadvantage of a patient.—*Hawley, Med. Ann. D. C., April '46.*

BOOK ABSTRACTS AND REVIEWS

The Care of the Aged (Geriatrics). By Malford W. Thewlis, M. D., Attending Specialist, General Medicine, United States Public Health Hospital, New York City; Attending Physician South County Hospital, Wakefield, Rhode Island; Director, Thewlis Clinic; Special Consultant, Rhode Island Department of Public Health. Fifth edition, thoroughly revised. Cloth. Price, \$8.00. Pp. 467 with 65 illustrations. St. Louis: The C. V. Mosby Company, 1946.

The number of old people living today far exceeds the number as of twenty years ago, and it is likely that the proportion of the aged will increase as the health of the nation improves and deaths from many of the diseases of early life are materially reduced. I find in my own practice that ten percent of my patients are over seventy years of age. These older patients present many problems peculiar to themselves. Though old and often cantankerous, and generally set in their ways, they are often people who have accomplished something in the world and always people who have lived long and learned something about life. They are often museums of pathology, and treatment of any specific condition must be modified in accordance with other disease processes, while their general state of weakness and their fixed habits must be borne in mind. Any help in understanding the effect

of old age on disease processes and their treatment should be welcomed by every practicing physician.

Thewlis' book on the Care of the Aged has gone through five editions, having been published first in 1919. It contains new material on congestive heart failure, home treatment of pneumonia, the kidneys during infections, psychotherapy, and the prevention of coronary thrombosis in physicians. The author describes the physiologic changes of senility and outlines some common errors in interpreting these changes as evidence of disease, stresses the need for modifying the dosage of drugs to fit the diminished requirements of the aged, points out the advantage of rest, and the disadvantages of prolonged bed rest, and emphasizes the need for compassion in dealing with men and women on the threshold of death. He emphasizes the fact that senility cannot be cured, but that in old people much relief from pain and suffering can be offered. Though the field of geriatrics is not a dramatic one, it offers beautiful opportunities to the physician whose primary interest is to relieve suffering.

Clarence K. Weil, M. D.

AMERICAN MEDICAL ASSOCIATION NEWS

DOCTOR STATES NAVY MEN NOT LIKELY TO SPREAD FILARIASIS

PARASITE IS TRANSMITTED ONLY BY MOSQUITO IN WHICH IT MATURES, NOT BY HUMAN CONTACT

There is no danger of filariasis, a mosquito borne disease, being spread in a community by the returning serviceman, according to Capt. L. T. Coggeshall (MC) U.S.N.R. A study of several thousand sailors and Marines reveals that their infection was extremely light, they were removed immediately from the area where the disease was prevalent and examination showed their blood to be free of parasites.

Writing in the May 4 issue of The Journal of the American Medical Association, Capt. Coggeshall, who was aided in his study by 12 Navy associates, says that filariasis was acquired by 10,431 Navy personnel in the South Pacific area, mostly in the Samoan group of islands. Of these 2,595 were observed over a 17-month period at Klamath Falls, Oregon.

Filariæ are threadlike worms which are transmitted to man by mosquito bites. Without the intermediary mosquito the disease cannot be spread. The adult worms live in the lymph glands while the larvae migrate into the blood stream where they are usually found only at night. During the waking hours of the patient it has been assumed that they retire to the lungs, kidneys and deep-lying tissues.

The filariæ may be present in the body without causing any symptoms. It is only when the worms block the lymph channels that definite symptoms occur, such as inflammation of the lymph glands which causes fever and painful swelling of the affected parts.

The author enumerates some of the reasons why there is no need to fear the establishment of filariasis in the United States by returning servicemen. He cites another investigator who says that a "climate favorable for the development of the larvae in the mosquito requires a mean temperature

of 80 F. and a humidity above 60 per cent. If this is true, only a relatively small area of the United States, those states bordering on the Gulf of Mexico, Georgia and South Carolina, is suitable. Filariasis was once prevalent in a part of that region as a result of the introduction of heavily infected slaves, yet it was unable to maintain itself and died out spontaneously. . . . There is no danger of spreading the disease by contact. Actually blood from an infected donor can be used for transfusion purposes without danger, as the larvae are noninfective for man unless they have partially matured in a mosquito and been introduced by biting. These and other reasons, such as better screening and mosquito control, would seem definitely to assure us that filariasis will not spread in this country and that the released serviceman cannot be a source of danger to his associates."

No specific treatment was employed because none of the men were ever very ill.

Elephantiasis, a complication of filariasis in which there is an enlargement of the infected parts, was observed in natives only after prolonged exposure. Although greatly feared by servicemen no cases have been found and because the men are no longer exposed, it is not expected that it will occur.

INFECTED MICE HARBOR VIRUS CAUSING MENINGEAL DISEASE

The common house mouse, long believed to be a constant source of infection, was responsible for the illness of four persons in the same community who had a rare but mild disease known as choriomeningitis, according to three investigators writing in the May 4 issue of *The Journal of the American Medical Association*.

Gilbert Dalldorf, M.D., from the Division of Laboratories and Research, New York State Department of Health, Albany, C. W. Jungeblut, M.D., from the Department of Bacteriology, Columbia University College of Physicians and Surgeons, New York, and Margaret Douglass Umphlet, B.S., M.A., of Raleigh, N. C., say that "many house mice trapped in the homes of choriomeningitis patients are virus carriers and infection in experimental mouse colonies may persist indefinitely, being transmitted from one generation to the next. These observations

suggest that a building harboring infected mice could be a persistent source of human disease."

The authors report three cases of choriomeningitis which developed among the residents of a multiple family dwelling in a North Carolina community, and a fourth case in a near neighbor. Two mice trapped in this building were found to be carriers of the virus causing this disease.

Choriomeningitis is marked by infection of the upper respiratory tract with symptoms of irritation of the meninges, or lining of the spinal cord, such as fever, headache and stiff neck. The disease lasts from 10 days to two weeks, and recovery is almost certain.

LACK OF HEART PAIN IN NEGROES DECEIVING IN DIAGNOSIS

Coronary thrombosis, one of the leading causes of death in this country, is as common among Negroes as it is among white people, according to William S. Hunter, M.D., of Louisville, Ky. However, since the Negro rarely has pain it is not usually diagnosed as heart disease before death.

Writing in the May 4 issue of *The Journal of the American Medical Association*, Dr. Hunter says that "it seems likely that between 2,800 and 4,600 Negroes in the United States are killed every year by myocardial infarction and that many more are disabled by the condition."

Dr. Hunter, who is from the Departments of Internal Medicine and Pathology, the University of Louisville Medical School, suggests that the absence of pain may be due to the fact that high blood pressure had been found to be much more common and much more severe among Negroes than among white people. This condition probably causes an enlargement of the secondary arteries through which the blood is detoured to the heart muscle. Thus pain is eliminated for it occurs only when some part of the heart muscle is deprived of its necessary blood supply.

Coronary thrombosis is usually associated with prolonged pain and with permanent damage to the heart during attacks. There is always shortness of breath and there may be some coughing because of water accumulating in the lungs as a result of the im-

paired circulation. Also present is a rapid and irregular pulse and a fall in blood pressure.

STREPTOMYCIN'S USE LIMITED TO RESEARCHERS, DOCTOR SAYS

SCARCITY MAKES IT NECESSARY TO RESTRICT USE TO INFECTIONS WHICH DON'T RESPOND TO OTHER DRUGS

In an official statement appearing in the May 4 issue of *The Journal of the American Medical Association*, Chester S. Keefer, M.D., of Boston, explains how the restricted supply of streptomycin is being used.

Dr. Keefer, Chairman of the Committee on Chemotherapeutics and Other Agents of the National Research Council, says:

Many recent publications describing the effects of streptomycin have created so much interest and so many demands for it that the medical profession and public should be informed of the arrangements now in effect to adjust the present very limited supply to a program of clinical investigation.

The Committee on Chemotherapeutics and Other Agents of the National Research Council, at the request of the Civilian Production Administration and the Streptomycin Producers Advisory Committee, is supervising an investigation of the clinical usefulness and possible toxicity of streptomycin. The primary interest of the committee in streptomycin is to determine its effectiveness and toxicity in certain infections which are not susceptible to treatment with sulfonamides, penicillin and other therapeutic agents.

The introduction of streptomycin to the medical profession is so recent that much remains to be learned concerning limitations of its usefulness, methods of administration, dosage, toxicity, and so on. Most of the information obtained so far has issued from military and civilian hospitals as a result of clinical investigations which have been carried out under arrangements between producers of streptomycin and individual clinical investigators. Similar studies are being continued and amplified by the Committee on Chemotherapeutics and Other Agents of the National Research Council, and a fraction of the streptomycin is now being allocated to the committee for these purposes. It is placed in charge of the chairman for distribution to those hospital physi-

cians most competent to obtain the vitally needed information.

In addition to the group of accredited investigators, individual physicians have been included in the research program when they have patients with diseases which are being studied by the committee. Full information concerning the bacteriologic diagnosis of the case is required, and when streptomycin is allotted it is with the understanding that a full report of the case is to be returned to the committee for analysis and that all unused material is to be returned for use in other suitable cases.

Because of the restricted supply of streptomycin, it is obvious that patients selected to receive it must be those whom it can be expected to benefit and from whose treatment useful, needed information can be derived. Under present conditions many requests will inevitably have to be refused.

Following is a list of the diseases which are under investigation, together with a list of those which are not being investigated:

DISEASES WHICH ARE TO BE INVESTIGATED WITH STREPTOMYCIN UNDER THE COMMITTEE

Gram negative bacillary infections of the genitourinary tract resistant to the sulfonamides; gram negative bacillary infections with bacteremia; *Hemophilus influenzae* infections, including meningitis, pneumonia, middle ear disease and laryngotracheitis; Friedlander's bacillus pneumonia; typhoid; *Salmonella* infections (paratyphoid); acute brucellosis with bacteremia; tularemia; bacterial endocarditis due to gram negative bacilli.

DISEASES WHICH ARE NOT BEING INVESTIGATED BY THE COMMITTEE AT PRESENT

Chronic idiopathic ulcerative colitis; lupus erythematosus acutus disseminatus; leukemia; cancer; fever of unknown cause; rheumatic fever; rheumatoid arthritis.

TUBERCULOSIS

For the present only those cases of tuberculosis which were already under treatment prior to March 1, 1946 are being studied. A broader program for the study of tuberculosis is planned, but it cannot be undertaken at the present time because of inadequate supplies of streptomycin. It is the hope of the Committee on Chemotherapeutics and Other Agents to explore this problem fur-

ther. The medical profession will be kept informed of developments.

PROCUREMENT AND ALLOCATION OF STREPTOMYCIN

All streptomycin now being produced must be reported to the Civilian Production Administration for allocation by it. Allocations are made to the Army, Navy, U. S. Public Health Service, Veterans Administration and the National Research Council after discussion of the needs of each and adjustment of the available supply to those needs.

No one other than the agencies named may purchase streptomycin. No patient who receives it may pay for it. No physician is charged for it.

The present program of clinical research is being conducted by the concerted efforts of the government, streptomycin producers, the National Research Council and civilian medical scientists of the highest standing with the sole purpose of obtaining the necessary information concerning streptomycin in the shortest possible time. The program of the National Research Council is being supported by grants in aid from eleven pharmaceutical and chemical companies.

MEMBERS OF COMMITTEE

The members of the committee are: Chester S. Keefer, Chairman, 65 East Newton Street, Boston; John S. Lockwood, Secretary, Yale University School of Medicine, New Haven, Conn.; E. K. Marshall, Jr., Johns Hopkins University School of Medicine, Baltimore; Francis G. Blake, Yale University School of Medicine, New Haven, Conn.; Perrin H. Long, Johns Hopkins University School of Medicine, Baltimore, and W. Barry Wood, Jr., 600 South Kingshighway, St. Louis.

SULFANILAMIDE SPRAY RELIEVES PAIN IN TUBERCULOSIS OF LARYNX

A New York physician reports that sulfanilamide spray has proved useful in alleviating the agonizing pain frequently associated with tuberculosis of the larynx.

Writing in the April 13 issue of The Journal of the American Medical Association, Mervin C. Myerson, M.D., says:

"I do not claim that the use of sulfanilamide powder insures a cure. I feel, however, that many patients who succumb to extensive and active tuberculosis of the lungs and other organs can be spared much of the pain which is frequently associated with involvement of the larynx. Some lives will be prolonged, some will be saved; but, whatever the outcome, many will not experience the agonizing pain and the inability to swallow which has always accompanied tuberculous ulcer of the larynx."

Tuberculosis of the larynx—the organ of voice—is one of the most serious complications of pulmonary tuberculosis. The condition is frequently associated with ulceration and pain.

Dr. Myerson explains that it has always been thought that the pain was due to tuberculous ulceration in the larynx. Work with the sulfanilamide spray proved that this was not the case. It was not the tuberculous ulcer which caused the pain but secondary infection of the ulcer by pus-generating organisms. When the involved area was sprayed with sulfanilamide powder the pain immediately disappeared. Dr. Myerson stressed, however, that the sulfanilamide spray influenced only the pain caused by the infected ulcer and had no effect on pain caused by other lesions which might be associated with a tuberculous larynx.

The sulfanilamide is sprayed into the larynx with a powder atomizer. Treatment can be carried out by patient, physician or nurse.

EYE-BANK MAY HELP THOUSANDS TO SEE AFTER CORNEAL GRAFT OPERATIONS

Between 10,000 and 15,000 blind persons who need corneal graft operations can be helped by eye banks which are being established all over the country.

Writing in the May issue of Hygeia, health magazine of the American Medical Association, Mrs. Henry Breckinridge, Executive Director of The Eye-Bank for Sight Restoration, Inc., in New York, says that the "purpose of this bank is to collect and preserve healthy corneal tissue from human eyes to be transplanted to blind persons who have lost their sight because of corneal defects." It is a nonprofit group.

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Miscellany

MANY DISTURBANCES IN BODY SIMULATE TRUE HEART DISEASE

Heart pain is not always due to true heart disease but may be caused by some disturbance remote from the heart such as gallstones, inflammation of the bladder, thyroid disease or stomach ulcers, according to Anna Samuelson, M. D., of New York.

Writing in the May issue of *Hygeia*, health magazine of the American Medical Association, Dr. Samuelson says that "in true heart disease, the pain may be constant or occurs spasmodically on exertion, walking against the wind, or excitement even while at rest. Easy fatigue and shortness of breath also suggest true heart disease.

"In simulated heart disease the patient is comfortable between attacks. In time if the cause of simulated heart disease is untreated, the pain becomes more frequent and severe."

Physicians can distinguish between the conditions by "modern aids such as the electrocardiograph, x-rays, fluoroscopy and laboratory tests.

"True heart pain is associated with apoplexy of the heart, hardening of the arteries, high blood pressure, rheumatic heart disease and sometimes syphilis.

"Simulated heart disease pain may be caused by the simplest disturbances. Faulty

diet such as eating fat and dried foods, over-eating or too rapid eating may excite a seizure. Correction of faulty eating habits will cure the pain. Digestive disorders may cause pain over the heart. Chronic constipation associated with flatulence and gas causes such pain.

"Gallstones, inflammation of the gallbladder, a sluggishly functioning gallbladder, may frequently cause symptoms of heart disease. The gallbladder nerves are intimately connected with those of the heart.

"Pain associated with ulcer of the stomach is also at times mistaken for true heart disease . . . Sudden development of an upside-down stomach, due to weakened condition of the diaphragm, or hernia of the diaphragm, closely resembles a heart pain attack.

"Thyroid disease is sometimes associated with heart pain. Overactive or underactive thyroid glands may sensitize nerves leading to the heart and cause pains similar to true heart disease.

"In an individual sensitive to tobacco, smoking acts like poison and causes heart pain. The tobacco excites the easily injured nerves going to the heart and produces the crushing left breast pain. To overcome this, smoking must be discontinued. Smoking is definitely harmful.

"Arthritis of the left shoulder, bursitis of the left shoulder, the unusual strain of one's left-sided chest muscles by extraordinary activity or arthritis of any portion of the spine may produce a pain that localizes in the region of the heart."

In conclusion Dr. Samuelson writes: "General hygienic measures of adequate rest, moderate activities, limitation of nervous strain, a diet of simple foods taken in moderation will greatly aid in checking heart pain."

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BACKGROUND

OVER THREE DECADES OF CLINICAL EXPERIENCE

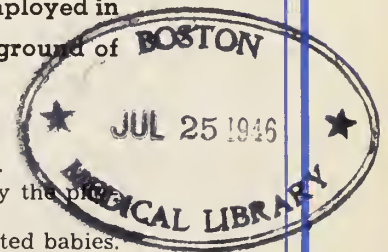
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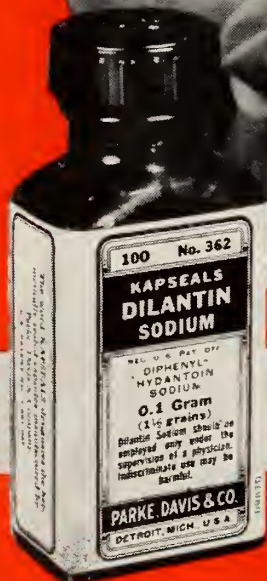
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THE INFLUENCE OF SERENDIPITY ON MEDICINE

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Early in my professional career I became interested in the effect on science generally and on medicine particularly of observations accidentally or incidentally made. Although such discoveries are made by chance or luck in that the observer is not investigating or seeking for such a result, the fact that he is able to comprehend this significance is of all importance. A similar observation made by an individual with an untrained mind would likely pass unnoticed and even though the occurrence is not anticipated the comprehension of its importance removes the discovery from the category of luck or chance. Since submitting my title to your program committee. I have had the opportunity of perusing a most fascinating book written by an eminent scientist who has only recently died. In this monograph, "The Way of an Investigator," by the late Walter B. Cannon, formerly Professor of Physiology at Harvard University, I learned that there existed a word designating such accidental observations. Serendipity was coined by Horace Walpole in 1754, and was suggested after he had read a fairy tale entitled "The Three Princes of Serendip" which, according to Cannon, is the ancient name of Ceylon. Walpole, in writing to a friend, Horace Mann, suggested that serendipity be added to our vocabulary because "as their highnesses traveled they were always making discoveries, by acci-

dent or sagacity, of things they were not in quest of." The definition of serendipity according to Webster is "The gift of finding valuable or agreeable things not sought for."

No reading is more stimulating than stories of accidental discoveries and the influence upon medical science. Often more amazing than tales of fiction and more exciting than fairy legends are these happenings in real life. In pursuing my chosen subject I reread some of the stories so familiar when I was a medical student and which have recently been reviewed with fresh interest and keener appreciation of their significance. Such well known accounts as the accidental finding of vaccination, of the roentgen ray, of the stethoscope, of Pare's healing salve, still fascinate one as do less familiar records which have been added to our knowledge of medical history.

Tradition has bequeathed to us the intriguing account of Archimedes, Greek inventor and mathematician, who noted water overflowing as he stepped into his bath. The thought that struck him, as he ran home naked, crying, "Eureka—I have found it"—was no less than the idea of the hydrostatic principle which bears his name. He was conscious of a significant discovery that a body immersed in a liquid sustains an upward pressure equal to the weight of the liquid displaced.

In the writings of Hippocrates, the father of medicine, we find no end of evidence that he always noted the strange and the unusual. Pythagoras, Greek philosopher, is said to have thought of the musical scale upon passing a blacksmith shop and hear-

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ing the hammer strike the anvil, and later he introduced the mathematics of acoustics. There are the time-worn tales of Galileo, father of mathematics, watching the swaying lamps in the Cathedral of Pisa, envisioning the laws of motion; of James Watt, as a youth, noting the possibility of the steam engine as he watched the tea kettle lid rise and fall; of Sir Isaac Newton observing the falling apple and the introduction of the theory of gravitation; and of the accidental discovery of America when Columbus was seeking a short route to the East.

In 1780, in the city of Bologna, electrophysiology originated in the home of the Galvanis. Lucia, the fair wife of Aloiso Galvani, was not in good health and a diet of frog legs was prescribed for her. The frog legs were suspended by a copper wire from an iron balustrade and when, as the result of swinging in the breeze, they touched the iron, violent convulsions of the muscles were noted. Lucia is said to have first noticed this uncanny phenomenon and thereupon Galvani set about to learn the cause. His elaborate studies of experiments were climaxed in the description of galvanism. Volta, his contemporary, later analyzed this current and these were the chance beginnings of our knowledge of animal electricity.

The story of Ambroise Pare', who lived in the 16th century and is considered the father of modern surgery, is one which should be recalled. This independent, pious army surgeon was the first to use simple dressings for gunshot wounds, supplanting the treatment of cauterization and boiling oil which was the accepted method of treatment at that time. "Following a heavy engagement in which there were many casualties, the supply of boiling oil ran out. At last my oil lacked and I was constrained to apply in its place a digestive made of yolks of eggs, oil of roses and turpentine. That night I could not sleep fearing the effect on the poor patient." He arose early the next morning to see whether his patients had survived such inadequate therapy, and to his great astonishment he found the wounds that had been treated with his "salve of puppy-dogs" were without inflammation and swelling. Because of this observation he stated, "I resolved with myself never more to burn thus cruelly poor men wounded with gunshot."

There is a delightful story of a country doctor who introduced digitalis as a therapeutic agent. He was William Withering, who knew a family of farmers in his native Shropshire who were very successful in treating dropsy with a secret concoction of herbs. Being a skilled botanist Withering found that the active ingredient used was the flower of the purple foxglove, or digitalis. He first applied its use in relieving the American rebels in 1775 who suffered from edema and ascites. His monograph, "An Account of the Foxglove," is considered a medical masterpiece. Dropsy had been considered a primary disease until Withering showed that it could be due to cardiac weakness.

Various are the legends attached to the origin of the stethoscope. We know that the shy and brilliant young French physician, Theophile Laennec, was quite disturbed because he could not properly examine the chest in the case of a robust young woman who was in great distress with heart trouble. One day, while walking through the Gardens of the Louvre, he saw some boys playing on top a pile of debris. One youth was tapping the end of a long beam while his companions had their ears pressed close to receive the sound traveling along this make-shift telephone. Immediately he grasped the principle and he hurried to the Necker Hospital, rolled a piece of paper into a cylinder and applied it to the chest of his patient. Thus, in 1816 the medium of auscultation became practical, and, according to Victor Robinson, "It is the crowning glory of physical diagnosis." Approximately 15 years before, Leopold Auenbrugger, a young Austrian physician, had applied the "tapping system," or percussion, to the body because he had observed that innkeepers were able to determine how full beer kegs were by tapping the surface of the keg.

Ignaz Semmelweiss, a young Hungarian, who died in 1865 at the age of 47, sacrificed his life to find the cause of puerperal fever that had taken such a tragic toll of lives. From 10 to 30 per cent of mothers attended by medical students and doctors died, whereas strangely enough the mortality rate was only 3 per cent in the division of the hospital where midwives attended the patients. Semmelweiss was puzzled by this

discrepancy. He studied the problem unceasingly, attended postmortems of the dead women but found no explanation. A friend and co-worker died of blood poisoning which had been contracted while performing an autopsy upon a mother dead from childbed fever. Semmelweiss noted the similarity of the pathologic changes in his friend's body and those dying from puerperal fever. He became convinced that puerperal sepsis was contagious and that it was carried from the autopsy room to the delivery room by the hands of the students. Thereupon he ordered scrubbing of the hands with soap and water and a nail brush and disinfection with chloride of lime. The mortality rate showed a spectacular fall. Semmelweiss was persecuted for preaching this doctrine and in 1865 developed an infection and died a victim of the disease he had clarified.

Contributions have been made not only by those highly skilled in science but also by medical students. A classical example is the observation by F. Rennuci, who was a pupil in the class of the famous dermatologist, Baron Alibert, of Paris. Rennuci doubted how the "natural method" which was being taught could be of value when causes of disease were unknown. The case of psora, gale, or the itch, was being demonstrated. Rennuci said he knew the cause of this disease but his teacher would not consider the idea. "But all the old women in Corsica, my country, know the cause," he persisted, "and they know how to cure the itch." He recalled watching one old market-woman with the itch on her hand between the fingers where the skin is thin and tender, in which there was a red spot and a pustule covered by a little scab. By means of a fine needle she pricked the skin behind the red spot and removed a little red spider or insect. Following this the itch disappeared. Finally the student was permitted to demonstrate the validity of his theory when the insect was found in the hand of a young woman with the itch. Thus, the etiologic factor in scabies was proved.

"I cannot take smallpox, because I have had the cowpox," a milkmaid said, and Edward Jenner never forgot this remark which he had heard in 1768. Later he mentioned this to his teacher John Hunter, the great English surgeon, and stated that

the farmers and dairy maids in his native Gloucestershire had this idea. After a long experimentation, opportunity came in 1786. According to Jenner's own words, "The first experiment was made upon a lad by the name of Phipps, in whose arm a little vaccine virus was inserted which was taken from the hand of the young woman who had been accidentally infected by a cow. Notwithstanding the resemblance which this pustule, thus excited on the boy's arm, bore to a variolous inoculation, yet as the indisposition attending it was barely perceptible, I could scarcely persuade myself the patient was secure from the smallpox. However, on his being inoculated some months afterwards, it proved that he was secure." From this date smallpox was controlled. The discovery of a vaccination against the dreadful plague of smallpox was the first step in scientific prophylaxis of disease.

The story of a successful failure resulting in the accidental development of a coal-tar dye is interesting. In 1856, an 18-year old bus boy, William Perkins, worked in the laboratory of Faraday. The chemistry teacher had set for him a task no less difficult than the making of synthetic quinine which, as we know, came only in 1944. Perkins obtained only a thick, black, tar-like substance by oxidizing aniline with chromic acid. In disgust he washed the dirty test tube and a purple solution resulted, which was the first aniline dye. From this discovery over 30,000 different dyes have resulted. Bayer started with the same raw material and produced aspirin.

Preventive vaccination also developed from an accidental observation. Louis Pasteur in 1880, together with his co-workers Roux and Chamberland, was experimenting with cultures of chicken cholera. During the course of experimentation some of the cultures were allowed to get old, and, although Pasteur knew that these cultures were old, he was determined to find out the effect of their injection into the chickens. Following this trial the chickens became drowsy but did not die and the following morning were perfectly all right. The day following this Pasteur and his family, as well as his two assistants Roux and Chamberland, left for a vacation. Upon their return he resumed the experimental

investigation and when told that the only two chicks that had survived previous injections were the two that had been given the old cultures, he decided to reinject them, together with other chicks. This was done with the result that only the two which were previously injected with the old cultures survived the injection of the new and virulent culture, whereas all the others died. Making this chance observation, he said, "This is my most remarkable discovery, a vaccine more scientific than the one for smallpox where no one has seen the germ; we will apply this to anthrax and we will save lives." Garrison states, "The principle that pathogenic properties of a virus can be attenuated or heightened by successive passages through the bodies of appropriate animals led to one of the most luminous thoughts in the history of science, that the origin or extinction of infectious disease in the past may be simply due to the strengthening or weakening of its virus by external conditions, in some such way as the above."

The development of collateral circulation was accidentally discovered by John Hunter who was forever experimenting. Once in Richmond Park he tied the external carotid artery on one side of a deer. Following this he observed the half grown antler on that side became cold to the touch, a finding which seemed obvious. He was, however, perplexed a week later when he re-examined the antler and found that not only had it regained its former warmth but was even growing. His first presumption was that the ligation had not been successful. The buck was sacrificed and, although he found the ligature on the vessel was still in place, he noticed that small branches of the ligated artery above and below the ligature were enlarged and that the ligated segment was being circumvented through the newly opened channels restoring the normal blood supply to the antler. Hunter reasoned that under the stimulus of necessity, small arterial channels increased in size and assumed the function of the larger. He concluded, "I must remember that." Several months later he was called upon to treat a patient with a popliteal aneurysm, a condition which was usually treated by amputation above the site of the aneurysm because other operations usually resulted

fatally. Not wishing to sacrifice the extremity, he recalled the experience which he had had with the buck, so that he ligated the artery above the aneurysm in the lower part of the canal which now bears his name, and in six weeks the patient was discharged as well.

Claude Bernard, who lived from 1813 to 1878, was one of the world's greatest physiologists, and was an experimenter who coupled imagination with ability. Three great discoveries which are examples of his recognizing the importance of accidental phenomena were the discovery of the glycogenic function of the liver, the finding of the true nature of the action of the pancreatic juice, and the discovery of the function of the vasomotor nerves. I quote from Goldstein the accounts of these discoveries in *Annals of Medical History* as follows: "Practically all present knowledge of absorption of food materials was determined by the light of Bernard's discoveries relating to intestinal digestion. It was the picture of fat emulsion that first brought his attention to pancreatic secretion. He was investigating comparative digestion in herbivorous and carnivorous animals and noted that fat introduced into the stomach of a rabbit did not become milky and chyle-like until it reached a point much lower in the intestine than was observed when a similar procedure was instituted in a dog, where the entrance of the pancreatic duct is common with the bile duct. He further noticed that fat emulsification always occurs below the entrance of the pancreatic duct and never above it, excluding the action of the bile. He immediately discontinued his study, investigated the nature of this phenomenon, which culminated in the discovery of the digestive nature of the pancreatic juice."

His discovery of the vasomotor nerves established the reflex control of circulation and was of immense value in clearing up heretofore obscure physiologic and pathologic phenomena which had been thought vital processes, and not explainable on a physio-chemical basis. This discovery was an unlooked for observation. He was studying the effect of sectioning certain nerves on nutrition and heat production in the tissues they supply. He thought that the nerves were the factors controlling heat

production, and was greatly surprised to find that section of the cervical nerves in the neck of a rabbit caused a marked increase in heat production, instead of the expected fall. He also noted the accompanying vascular congestion, but did not correlate the two, since he believed firmly that nervous influences were sufficient to account for the thermal change. It remained for Brown-Sequard to identify the increased heat as due to paralysis of the blood vessel wall, resulting in vascular dilatation and congestion.

The glycogenic function of the liver was also discovered by Bernard. He was concerned with diabetes, and, in feeding animals on a rich diet of sugar, discovered an abundant presence of sugar in the hepatic vein, but none in the portal vein. The liver then evidently manufactured sugar out of certain substances brought to it by the blood in the portal vein. He later showed that sugar had a precursor in the liver which he called glycogen (sugar former), which produced sugar after the action of certain enzymes. The present day studies of nutrition and dietetics are greatly indebted to the fundamental works of Bernard in establishing the fate and mechanism of utilization of carbohydrates.

Although the original operative treatment of congenital hypertrophic pyloric stenosis consisted of gastro-jejunostomy, the Fredet-Weber operation which consisted of a longitudinal incision of the hypertrophic musculature and its transverse closure was a great advance in the treatment of this condition. On August 23, 1911, Conrad Ramsted, when operating upon an infant with hypertrophic pyloric stenosis in which he attempted a classical Fredet-Weber operation, had difficulty in closing the longitudinal incision by transverse suture. The exposed mucosa was covered with the tag of omentum. In the second operation he made no attempt to close the pyloric incision, his account of this being as follows: "When I was first confronted with an operation for pyloric stenosis, I decided to perform the partial pyloroplasty according to Weber. During the operation I noticed, after section of the firmly contracted, almost bloodless and hypertrophied muscular ring, that the wound edges gaped markedly. I had the impression that the

stenosis was already overcome. Nevertheless, I sutured the incision transversely in order to complete the Weber pyloroplasty. The tension of the wound edges was, however, very great and the sutures cut through so that the union of the wound edges in the opposite direction was incomplete. I therefore covered the sutured area with a tag of omentum for protection." In this way he proved that transverse closure of the incision was unnecessary and probably harmful since it contributed to further obstruction through infolding of the mucosa.

The use of ethylene as an anesthetic agent was largely the result of an accidental observation. Various investigations have been made with ethylene. Becker first prepared olefant gas, as ethylene was referred to in the earlier literature. It was not until 1918 when Arno B. Luckhardt and R. C. Thompson began working with ethylene as an anesthetic agent. Their original observations were made upon animals. Their work was stimulated by the observations of William Crocker and Lee Irving Knight who, in 1908, had studied the effects of ethylene on carnations. They showed that carnations brought into the city frequently wilted very early. They found that the illuminating gas which contains about 4 per cent of ethylene was the guilty offender. In order to determine what effect this poison had on animal life, they undertook their investigation. Although, when ethylene gas was administered to an animal, the animal presumably died, on removing the gas it appeared as if the animal was simply asleep and that ethylene was an efficient anesthetic agent.

The discovery of diabetes and its relationship to pancreatic disease was accidentally observed. According to Cannon, von Mering and Minkowski, in the latter part of the last century, were studying the role of the pancreas in digestion. Pancreatectomy was done in a number of dogs. Following this procedure a chance observation was made by a laboratory assistant that swarms of flies were attracted to the urine of these animals. Upon examination of the urine it was found to contain a great deal of sugar. Thus, relationship between the pancreas and the production of glycosuria was established. A chance observation led to the discovery of insulin by Frederick Banting,

who, in perusing an article by Moses Baron in *Surgery, Gynecology and Obstetrics*, learned that this article described a case in which a stone had blocked the pancreatic duct and had caused atrophy of the pancreatic cells except those of the islands of Langerhans. Baron reproduced this syndrome experimentally in the dog by ligating the pancreatic duct. According to Banting, he was greatly impressed by this observation and at two o'clock in the morning he rose and jotted in his notebook the following, "Ligate pancreatic ducts of dogs. Wait 6 to 8 weeks for degeneration. Remove the residue and extract." He reasoned that an extract of the island of Langerhans might relieve the excess secretion of sugar in diabetes which theory was subsequently proved by his experimental results.

Allergy was also an accidental observation. Richet, Professor of Physiology at the University of Paris, was desirous of determining the cause of the urticaria produced by the Portuguese man-of-war and to determine whether the hives produced by the stinging nettle or jelly fish was due to a toxin. His original observations were made while vacationing on the Prince of Monaco's yacht. His insatiable desire to know about this phenomenon was responsible for his continuing his research, using the sea anemone. He made extracts from the sea anemone and injected them into dogs. Large doses made them ill whereas small doses had little or no effect. He thought that if the result was due to a toxin he could immunize the dogs against the toxin, and that by beginning with small doses and increasing the dose the animal would be able to stand large quantities without developing symptoms. With subsequent injections, however, the animal became much sicker and he observed that after the second or third injection of the same size previously given, the animal became extremely ill, and that instead of immunity being conferred apparently immunity was removed. In many instances subsequent small doses resulted in death of the animal. Continued research by Richet and his collaborator, Portier, extending throughout the day and night resulted in the establishment of present day conception of allergy.

Wilhelm Conrad Roentgen truly electrified the meeting of the Physical and Medical Society, December 18, 1895, when he presented his four thousand word paper "On a New Kind of Ray." That his finding is purely accidental is true but Roentgen was prepared to investigate intelligently this new phenomenon and was diligently perseverant in continuing his investigation which established the science of radiology. He was working alone in a darkened laboratory when he discovered by chance that these astonishing new rays had the property of passing through solid matter. He was working with a cathode ray tube with a jacket of black cardboard and was testing the opacity of the cover by agitating the tube when he suddenly noticed a light which appeared some distance from the tube of his barium platinocyanide screen. Accidentally his hand passed between the tube and the screen and there appeared a faint image of the hand on the screen. The outline of the fingers was visible and even the bones which appeared as dark shadows. He was so impressed by this that he begged his wife to place her hand on the holder loaded with a photographic plate. For thirteen minutes the rays were directed from one of his tubes on to the hand, and when the plate was developed it was possible to visualize the outline of the hand, the bones appearing lighter within the darker image of the finger, and the two rings on her fingers appeared lightest of all. By this accidental observation, x-rays and their value in diagnosis in medicine were discovered.

In 1896, Henri Becquerel, a distinguished French physicist, wrote upon radiation from uranium. He tells how he experimented with various substances exposed in the sunlight, and placed them in a dark room on photographic plates for varying periods of time in order to determine the intensity of irradiation of the substances with which he experimented. Among these were uranium and pitch blend. Because it rained one day the experiments were not done because there was no sun. He states, "I kept my arrangements all prepared and put back the holders in the drawer of the case and left in place the crusts of uranium salt. Since the sun did not show itself again for several days, I developed the photographic

plate expecting to find images very feeble. On the contrary, the silhouettes appeared with great intensity. I once thought that action might be able to go on in the dark, and I arranged the following experiment: At the bottom of a box made of cardboard I placed a photographic plate and then on the sensitive face I laid a crust of uranium salt which was convex, so that it touched the emulsion only at a few points. Then alongside of it I placed on the same plate crust of the same salt, separated from the emulsion by a thin plate of glass. This operation was carried out in the dark room. The box was shut and was then enclosed in another cardboard box and put away in a drawer. I did the same thing with the holder enclosed by an aluminum plate in which I put a photographic plate and laid on it a crust of uranium salt. The holder was enclosed in a big box and put into a drawer. After 5 hours I developed the plate and the silhouettes of the encrusted crystals showed black as in the former experiment as if they had been rendered phosphorescent by light." Becquerel subsequently observed that radiation from radium would destroy skin because, while carrying a glass tube of radium in the pocket of his waist coat, he became burned. He complained to the Curies from whom he had received the radium and declared, "I love this radium, but I've got a grudge against it." It is because of the original observations by Becquerel that the Curies became interested in radioactive substances and demonstrated radium.

The relationship of vitamin B to beri-beri was accidental. Although the Japanese had realized that beri-beri was due to dietary insufficiency and could be prevented by a diet which contains meat, fruit and vegetables, it was not until almost a decade later that a Dutch medical officer, Eijkman, working in the Dutch East Indies, found that when a stock of chicken feed for the laboratory chickens ran out and he had to feed them on table scraps from the hospital which consisted mostly of polished rice where beri-beri was prevalent, the chickens got beri-beri. He found that an addition of the skin of the rice kernel, or even rice bran, to the polished rice prevented the disease in chickens.

I would like to relate an instance in my own experience which led to the development of the passive technique of bronchography. While serving as exchange surgical assistant in the Zurich Surgical Clinic under Professor Clairmont an esophagoscopy was done for carcinoma of the esophagus. Preceding this a complete anesthetization of the pharynx had been made. Because the tumor visualized esophagoscopically was not at the same level as had been anticipated from previous roentgenography, the patient was taken from the endoscopic room into the adjoining fluoroscopic room and given a barium meal. Much to our surprise the barium, instead of passing into the esophagus as it had done the day before, passed into the trachea. The patient began to cough and within a few minutes had coughed up all of the aspirated barium. Although the possibility of a perforation of the esophagus into the trachea was considered, the fact that fluoroscopy the day before had revealed no such complication and subsequent fluoroscopy confirmed the absence of such complications, it was obvious that anesthesia of the pharynx had been responsible for the passage of the barium into the pharynx instead of into the esophagus. Subsequently, after returning to this country and while at the University of Wisconsin, it was demonstrated that anesthesia of the anterior fossal pillar abolishes the swallowing reflex and that substances taken into the mouth pass into the larynx instead of the esophagus. In this way, filling of the tracheo-bronchial tree with a contrast substance can be accomplished according to the passive technique.

A condition which has been of great concern to most physicians but particularly to obstetricians, surgeons and internists has been thrombophlebitis or milk leg. Not only is this condition extremely painful but it is also very disabling, in that swelling of the involved extremity is likely to persist for months and years after the acute attack has subsided.

The treatment was previously very unsatisfactory and little could be done to decrease the confinement to bed because of continued fever and pain which frequently persisted for 6 to 8 weeks. Of even greater

significance was the prolonged edema or swelling.

Approximately 10 years ago while on grand rounds on the Tulane Service at the Charity Hospital, a patient suffering with thrombophlebitis was seen by the staff. The patient appeared ill, had a temperature of 104 degrees, suffered considerable pain and her left leg and thigh were greatly swollen. In examining her an obvious paradox was observed. Whereas the temperature of her skin was generally increased (because of her fever) the temperature of the involved extremity was cold, a phenomenon which was difficult to explain. Because of our interest and experience in diseases of the peripheral arteries in which frequently a decrease in circulation in an extremity and a consequent diminution in skin temperature are due to spasm of the arterioles, the possibility of vasospasm in thrombophlebitis was considered. A local anesthetic agent, novocaine, was injected into the regional sympathetic ganglia and, much to our astonishment and gratification, the involved extremity became warm and the patient's pain disappeared. We then went into the experimental laboratory and proved conclusively that the pain, swelling, whiteness and coldness of the involved extremity in thrombophlebitis is due to spasm of accompanying arterioles and that rapid relief could be obtained by the simple local anesthesia of the regional sympathetic nerves. From a biologic standpoint this is an extremely interesting condition because, although the disease is limited to the veins, the symptoms and signs are the result of spasm of the arterioles, a phenomenon accidentally observed.

Another example of serendipity which has revolutionized the treatment of certain types of hemorrhagic disease was the accidental discovery of vitamin K. Henrik Dam, a Danish biologic chemist, while experimenting with chickens to determine whether they could synthesize cholesterol, noted extensive hemorrhages in the muscle and the subcutaneous tissues when the animals were fed a synthetic diet of casein, starch, marmite and cod liver oil. The blood in these animals also clotted more slowly than normal blood. Dam worked for a number of years on this problem and found that the cause of hemorrhagic diathesis was

due to deficiency in the dietary factor which was found in hemp seed, hog liver, and certain seeds and vegetables. This was designated vitamin K. It is a fat soluble vitamin which explains why a bleeding tendency may occur in jaundice. An obstruction to the outflow of bile, which is one cause of jaundice, results in an absence of bile from the intestinal tract; and since bile is essential for the absorption of fat, fat soluble vitamins are not absorbed.

A valuable example of serendipity was the accidental discovery of penicillin. According to Sir Alexander Fleming, the following happened: "When I first noticed the action of penicillin, I was playing with a culture of staphylococcus, doing nothing very important. Actually, what had happened was that I had contracted to write the chapter of a book on staphylococcus. A man had written saying that by certain methods he could make the colonies of staphylococcus appear not a bit like themselves. I was trying to see whether he was telling the truth. I had some culture plates of staphylococcus, looked at them occasionally under a microscope, put the cover back on and set them aside for a while. When some people have finished with a culture plate they throw it aside, and that is the end of it. They miss a lot of peculiar things that happen by accident. I didn't throw those plates away, and later on they became contaminated. Of course, if you take off the cover of a culture plate things get in from the air. One of these plates got contaminated with a mold. That wasn't unusual. We had often had plates contaminated with molds before and hadn't paid much attention to them, except to use appropriate language and throw them away. But this time there was something different on the plate. The mold itself wasn't a bit unusual, but what happened was unusual. The microbes in the neighborhood of that mold colony seemed to be dissolving. That was worth paying attention to. At least I thought it was, and I didn't pursue the original staphylococcal research. I touched that mold with a platinum wire and transferred some of the spores to another tube, off by themselves; there we had a pure culture of the mold that we could keep and experiment with. I knew nothing at all about molds at that stage of the pro-

ceedings. A mold starts off with a little spore, a tiny thing, smaller than a red blood corpuscle. When it grows it sends out a sprout or two, which branch again and again to produce the mass of mold that you recognize on bread or cheese, for example.

"We then tried to see what this mold did. One of the first steps, an easy one, was to put it on another culture plate. You take a fresh culture plate, plant the mold and let it grow in the room. You don't want an incubator for this; an ordinary room will do beautifully for mold. Just let it grow for three or four days. Next we took different microbes, whichever were handy, and streaked them across the plate up to the mold. Some of them grew right up to the mold; some of them didn't go anywhere near it. So here we had a mold that made something which diffused out into the agar and stopped the growth of some of the microbes, but not of others. We had seen this sort of thing before. It was about five or six years before this that I had shown exactly the same phenomenon, not with a mold, but with human tears. I had taken human tears and put them on an agar plate and streaked microbes up to them. Some of them were inhibited in the same way."

In this simple, accidental way was discovered the greatest antibiotic agent that has ever been known.

As shown by the above illustrations accidental observations have greatly influenced the progress of medicine and the health of individuals, and, although as emphasized previously, these observations were apparently only by accident or by chance, it must be emphasized that a prepared or trained mind is the most important factor in the so-called discovery. To quote from Hemmeter, "These experiences of great men which are said to follow so-called accidents, chance, lucky thoughts, or to be the consequence of some fortuitous circumstance, are nothing but the final catalytic stimulus which sets into a form a mass of conscious and subconscious thoughts and ideas that have antedated the supposed lucky thought."

Again to quote Cannon, "Many a man floated in water before Archimedes; apples fell from trees as long as the Garden of Eden (exact day unknown); and the out-rush of steam against resistance could have

been noted at any time since the discovery of fire and its use under a covered pot of water. In all three cases it was eons before the significance of these events was perceived. Obviously a chance discovery involves both the phenomenon to be observed and the appreciative, intelligent observer."

"The seeds of great discoveries are constantly floating around us, but they only take root in minds well prepared to receive them." (Joseph Henry, 1797-1879, foremost American physicist.)

The investigator must be observing, analytical, reserved and have the highest integrity. To quote Claude Bernard, "Put off your imagination, as you put off your overcoat, when you enter a laboratory; but put it on again, as you do your overcoat, when leaving the laboratory. Before you experiment, and between whiles, let your imagination wrap you around; put it right away from you during the experiment itself, lest it hinder your observing power."

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THE MENTALLY ILL

W. D. PARTLOW, M. D.

Superintendent

The Alabama State Hospitals
Tuscaloosa, Alabama

It is difficult to eradicate from the public thinking and from some of the medical profession the ancient impression that there is something mysterious and obscure which sets mental illness apart from other afflictions of the human being and places it in a category separate and apart as regards every approach, particularly management and treatment and public and professional attitude.

As psychiatry advances, we are happily changing that attitude and recognizing that the entire human organism in its physical construction and organization has a range of functions to perform, very important among which is mentality or mind. Like other functions of the human being which become disturbed or disordered from disease, likewise, mentality or mind may become disordered and, therefore, under such conditions, deviation from the usual or normal is observed, which we term mental illness or mental disease. Since healthy mind or normal mental function presides over and directs the life and activity of an individual, including his relationship to his fellows, when this function becomes disturbed and disordered, the tendency of the layman and the profession has in the past been to consign this particular type of illness to a category entirely separate and apart from human illness in an attitude of mystery, suspicion and distrust toward such sick person.

Since science has been slow to reveal specific or contributing causes of mental illness, the past has dealt largely with

symptoms in analyzing and playing one set of symptoms against another and against the normal in a study of such bazaar symptoms, experiences, dreams, and sex perversions in an effort to regard such symptoms as causes rather than allowing them to take their place as effects, results or symptoms of mental illness instead of pursuing the usual scientific approach through research for causes. For example, there was a time when the delusions accompanying general paralysis or paresis were attributed to persistent thinking on questions of wealth or power, whereas it has been long known that all of these symptoms of paresis are not causes at all but are expressions of a disturbed brain from syphilitic brain infection.

As mental illness becomes more and more recognized as simply one of the afflictions of the human organism falling in the general category of other human illness, the old superstitious attitude is gradually clearing away and instead of consigning those mentally ill to segregation in mental hospitals, there is a definite trend toward treatment in general hospitals. This trend will become more generally followed as schools of medicine everywhere teach more and more of psychiatry and pursue further and further intensive research of the type that gets away from a simple study of prominent mental symptoms and diagnoses on that superficial basis.

It is encouraging to note that the U. S. Veterans Administration is planning its general hospitals to include sections for the mentally ill.

It has been my observation that from two-thirds to three-fourths of all admissions to the State Hospital cooperate in a general hospital ward and general hospital situation as well as the average general hospital case and only the one-third or one-fourth of admissions need or require special provision.

For the above reasons and in order that mental cases may be cared for in hospitals instead of jails while awaiting commitment to the State Hospitals, I am definitely in favor of every general hospital setting apart a limited section of beds, properly located for the good of the nervous patient rather than for any reason of disturbing others.

SOME CLINICAL EXPERIENCES WITH BENADRYL

WM. HARVEY BLANK, M. D.

Associate Fellow, American College of Allergists
Birmingham, Alabama

It has been rather firmly established that one of the underlying factors in allergic conditions is an imbalance of histamine in the body economy. Experiments have shown that in some allergic outbursts there is an excess of histamine present in the blood and body tissues. Consequently, attempts at alleviation and/or prevention of these distressing conditions have often been aimed at control of or minimizing the excess histamine. Recent therapeutic agents have been histaminase and Hapamine. Neither has proven its worth and both have taken their places along with a host of other preparations which held promise in the laboratory but were found wanting in the crucible of clinical allergy. Histamine itself shows great promise in the treatment of Meniere's syndrome and acute multiple sclerosis, and is specific in relief of histamine cephalgia.

The newest and most promising of the so-called anti-histamine drugs is Benadryl.* The term anti-histamine is employed as a descriptive means for designating chemical compounds which have the property of preventing some of the pharmacologic actions of histamine. In the laboratory Benadryl antagonizes the effects of histamine on smooth muscle of the bronchioles and intestine of the guinea pig. The chemical name for this compound is beta-dimethyl-aminoethyl benzhydryl ether hydrochloride. The drug is absorbed by all routes of administration. Response orally occurs in 10 to 20 minutes; parenterally in 3 to 10 minutes. It may be given intramuscular-

ly or intravenously. Side reactions reported have been mild hypnosis, some nausea or headache. In our experience with the drug, we have noted the first to be the most common by far. In one instance it is reported that a physician who was taking the drug himself awoke to the fact that he was taking too much after he received a traffic ticket for passing through two red lights without being aware that he had done so. Several of our cases follow:

1. At 4 p. m. a physician brought his 16-year-old daughter to our office. She had an acute generalized, disfiguring urticaria accompanied by intolerable itching. This was her first attack and had appeared several hours previously. She was given 5 mgm. of Benadryl intramuscularly at once. In 15 minutes practically all itching had ceased and the wheals were fading. Another 3 mgm. were administered and she was placed on 50 mgm. (oral) every 4 hours as necessary. She was able to attend a dance that night. There has been no recurrence.

2. A 26-year-old white, female secretary had had intermittent urticaria for 3 weeks. Work and sleep had both been seriously affected. She received 5 mgm. of Benadryl hypodermically. Itching ceased in 10 minutes but she became drowsy. She returned to her office but was able to continue her work only with difficulty, because of lethargy. This passed off in about one hour. She used 50 mgm. capsules as necessary and, while she always obtained relief, she also became lethargic following the drug.

3. A 25-year-old white, coal miner suffered from physical allergy for 7 years. Contact of any part of his body with cold re-

*Benadryl furnished through the courtesy of Parke, Davis & Co.

sulted in the appearance of a large wheal. Administration of large doses of Benadryl parenterally and orally failed to give any relief whatsoever.

4. A 5-year-old child was brought to the office 30 minutes after ingesting fresh English peas for the first time. Both lips and the area about the right eye were extremely edematous. Ten (10) mgm. of Benadryl were administered orally in water and 5 mgm. more in 20 minutes. The swelling subsided rapidly. Several more 10 mgm. doses were given during the next 24 hours. The affected areas remained clear. There were no side reactions and no recurrences.

5. A 35-year-old white female had had intermittent angioneurotic edema for several months. On one occasion she was hospitalized. Repeated doses of adrenalin were ineffective. During one episode, when the edema was confined to a hand, surgery was contemplated since it was felt that she had a palmar infection. She was placed on 50 mgm. of Benadryl 4 times a day. This was gradually reduced to 50 mgm. daily, and then stopped altogether. There were no side reactions. There have been several mild recurrences.

6. A 42-year-old white female in the menopause has had intermittent angioneurotic edema for the past 4 months. Repeated and varied doses of Benadryl have not affected the edema in any way. Administration is always accompanied by lethargy, headache and some nausea.

7. A 56-year-old white female, uncontrolled diabetic had an initial attack of generalized urticaria recently. Itching was intolerable. Adrenalin gave practically no relief. When first seen her body and extremities were covered with excoriated and bleeding areas. At that time she was also in diabetic acidosis. Administration of 5 mgm. of Benadryl intramuscularly, followed in 15 minutes by a similar dose, resulted in the first sleep in over 24 hours. Oral Benadryl in 50 mgm. capsules was substituted the next day. There were several slight recurrences which were easily controlled by one capsule of the drug. (Note: In this case it is not possible to state whether the sleep following the drug was a side reaction or was due to relief of symptoms. However, oral administration was never accompanied by hypnosis.)

Our experience with this drug in the treatment of asthma has not been extensive. In those cases in which we have used it, our results have not been so gratifying as in urticaria or angioneurotic edema. Some of our cases of perennial allergic rhinitis have had temporary relief; in others, we have been obliged to revert to standard methods of treatment.

With the advent of the hay-fever season we shall have the opportunity of using this drug on a large number of hay-fever victims, and will then be better able to evaluate its use in this condition.

We have noted that Benadryl is frequently effective where adrenalin is not; and, conversely, that adrenalin often gives relief when Benadryl fails.

In our experience Benadryl gave relief in approximately 80 per cent of patients suffering from urticaria or angioneurotic edema. The drug does not cure. It gives relief, but it does so more effectively and with fewer side reactions than any other drug heretofore available.

Ureteropelvic Obstruction—Due to the insidious nature of this condition the symptoms develop over an extended period and are often misleading. Frequently the chief complaint of the patient would appear to be unrelated to the urinary tract. Pain in the loin, or upper quadrant, is usually the presenting symptom. The pain is dull, is not colicky in type and does not radiate. It is usually characterized by irregular periods of remission, and is almost never severe enough to require sedation. Occasionally the patient may complain of mild frequency of urination, dysuria or cloudy urine. In most cases, symptoms directing the physician's attention to the urinary tract are lacking. Indigestion, accompanied by nausea, belching, constipation and vague abdominal pain represented the only complaint of 30 per cent of the cases reported herein. These gastro-intestinal complaints are usually present in a lesser degree when pain on the affected side is the chief complaint.

Physical examination is usually non-contributory in this condition and it is only rarely that the hydronephrotic sac is palpable as a mass in the flank.

Laboratory studies are of no help in suspecting the existence of ureteropelvic obstruction unless infection exists in the hydronephrotic sac and abnormal cellular elements are discovered in the urine. Voided renal function estimations are invariably within normal limits.—*Beard, J. M. A. Georgia, April '46.*

BETTER HEALTH THROUGH HEALTH EDUCATION

JOHN M. GIBSON, A. B., B. LIT.
Montgomery, Alabama

Apologists for dictatorships (of which there are, fortunately, considerably fewer now than formerly) call paper-littered sidewalks the symbols of democracy. If, they say, you do not force people by threats of imprisonment, or worse, to place their old newspapers and other discarded articles in the proper receptacles, they will drop them wherever they choose, and you will never have clean, unlittered streets.

But we in America know those apologists are mistaken. You do not have to sacrifice your freedom to a despot in order to keep your streets clean. The glorious privilege of enjoying a free suffrage, a free press and the other guarantees contained in the Bill of Rights are not incompatible with municipal tidiness. We know a better way to keep our streets clean, an infinitely less costly way. We do it through the development of civic pride and a sense of good citizenship—in brief, through education.

So, in America, we did not send secret police to wait upon those who did not buy as many war bonds as we thought they should. We do not throw a person into prison because he fails to plant a Victory garden, or flirts with inflation and postwar depression by blowing in his war-inflated income, or loafs on his job, or wastes food. We spend millions of dollars to "sell" patriotism and good citizenship and to develop, first, a knowledge of what one needs to do and, second, the desire on the part of all of us to do the right and patriotic thing. That, we have found, is the infinitely wiser and better plan, although unfortunately some (a very small minority) cannot be appealed to in that manner.

The Alabama State Department of Health is one of a number of official and unofficial health agencies which are applying the anti-Gestapo principle to health-building. It realizes of course that public health laws must be passed by the Legislature and sternly enforced. It would be foolish indeed to leave a restaurant-keeper, for instance, free to set his own standard of cleanliness or permit the victim of a dangerous communicable disease to move about at will. But there is a province beyond that of law and

the show of force, in which personal conduct cannot be regulated by rules and regulations, even for the good of the individual directly concerned or of society as a whole. That is the province of education in the field of health. In that province the public health agencies have an opportunity and a duty to show people the proper and wise things to do, from a health standpoint, and arouse in them a desire to follow the course of health wisdom. That, in brief, is the task of health education.

Health education of course is too vast a thing to be confined to public health agencies. It is also the work of the physician in private practice, who does not think of himself as an educator at all but is one nevertheless as long as he advises his patients on health care while he examines them to determine their ailments and prescribes the remedies which appear to be indicated. It is the work also of the school teacher, who functions as the unofficial adviser of her pupils in all matters affecting their welfare and tries to keep up their attendance records by telling them what to do and not to do to avoid unnecessary illness. Parents, ever solicitous regarding the health of their children and constantly insisting upon their avoiding exposure to colds and other communicable diseases, are among the best of all health educators, as long as the advice they give is sound. Leaders of civic organizations, officers of P.-T. A. groups, relatively humble folk whose words and example exert an influence upon their narrow circle of acquaintances—all these and many others are health educators.

In a more limited, or official, sense, however, health education consists of a definite program under the supervision of an official public health agency to inform the people of a state or community regarding matters of public and individual health.

The health education program of the Alabama State Department of Health consists (1) of addresses, conferences, the distribution of booklets and similar activities as part of the regular health-protection duties of staff members of various bureaus and

divisions, and (2) of the work of the Division of Public Health Education, which is devoted exclusively to health education. The present article will concern itself chiefly with the latter.

In their health education activities, the other units of the State Department of Health deal in the main with individuals and relatively small groups and of course their relations are direct, on a face-to-face or man-to-man basis. The work of the Division of Public Health Education, on the contrary, deals with people in the mass, in the thousands and tens of thousands and, in some instances, even the hundreds of thousands. Inevitably, such a relationship is not direct or person-to-person, but indirect.

There need be no conflict between these two modes of keeping the people of Alabama or of any other state informed on health matters. One complements the other. Both are necessary for a well-rounded program.

The information-disseminating instrumentalities used by the State Department of Health to multiply and remultiply its health messages and carry them into practically every home in Alabama are, in the main, the radio, the newspaper and the motion picture.

News stories, feature articles and other material of a health nature are prepared and issued on a regular schedule to every daily and weekly newspaper in the State and also to several other publications. In accordance with the long-established policy of playing no favorites, this material is made available to all without discrimination, for such use as they may wish to make of it. An article published on a certain morning or afternoon of a certain day may be devoted to any one of a large number of subjects. It may remind the reader that the cold, influenza and pneumonia season is approaching. Or it may consist of a message from the State Health Officer urging people to avail themselves of the typhoid vaccination which they may obtain free from their county health departments or at small cost from their own physicians. Or it may tell of the opening of a new cancer diagnostic and treatment clinic. Or it may warn of a sharp rise in the prevalence of a dangerous communicable disease. Or—but the list is well-nigh endless. Every one of the papers publishing an article of this kind

carries its message into the homes of Alabamians, ranging from less than a thousand to hundreds of thousands of them.

Health booklets are also published from time to time by this Division. These of course are in addition to those published by other bureaus and divisions to serve their particular needs.

The State Department of Health sponsors a weekly radio talk heard over Station WSFA (Montgomery) every Saturday morning from 11:30 to 11:45. Like the news stories and feature articles issued in its health education program, radio talks, usually delivered by the State Health Officer, seek to spread the message of better health to the people hearing them. That those doing so constitute a considerable segment of the total population of the State is shown by the fact that, in the 25 counties within daytime range of Station WSFA, there are radio receiving sets available to an estimated half a million persons. Exactly how many of those half-million listen to that particular broadcast is of course a matter of conjecture. But indications are that many of them do so. This is particularly true of housewives, whom it is especially desired to reach. Like the newspaper articles, these talks discuss a wide range of subjects in the broad, challenging field of personal and community health. Being considerably longer than the newspaper articles, they convey more information about the diseases and health problems discussed. After delivery the talks are mimeographed and copies are sent every week to health workers in this and other states, libraries, schools and a growing number of persons who have requested that their names be placed on the mailing list. Copies are also filed for use in filling requests for material dealing with the subjects they cover. Such requests come from women facing the task of writing club papers, public officials wishing to present health problems to their constituencies, high school, college and university students struggling with themes and theses and numerous others. Some are printed in full in health publications and newspapers.

Beginning in a modest sort of way several years ago, with headquarters in Athens, the Film Library was made a responsibility of the State Health Department's Division of Public Health Education in the fall of

1942. It now contains about 158 films on approximately 23 different subjects, including every phase of individual and community health. In addition to their use by county health officers and others in programs officially sponsored by county health departments, these films are also used widely by schools, clubs and other organizations as part of their own activities. Films are loaned, however, only to county health departments, which are held responsible for their safety and prompt return. Individuals and organizations wishing to use them must make application to their county health departments.

The powerful agencies of mass instruction which the Alabama State Department of Health is attempting to harness to the task of making Alabamians healthier and therefore happier are the same ones that, in tyrants' hands, have fostered hate campaigns, started wars and brought untold misery to millions of innocent people. Men of peace and good will the world over are looking forward hopefully to the time when they will be devoted entirely to the lifting of health levels and the achievement of other worthwhile tasks.

Endolaryngeal Carcinoma—Surgery has an excellent record of success in the treatment of the early and moderately advanced stages of endolaryngeal carcinoma, (Jackson, LeJeune, Peacock and Colledge, and others) but it has met difficulties and reverses in the management of lesions arising in the other sites considered. This provided a stimulus for the original attempts at treatment by radiation. No significant improvement occurred, however, until Coutard employed the principle of protracted fractionation based on the experimental work of Regaud. This revised all previous conceptions regarding the utility of radiation in this field and must be recognized as a landmark in the therapy of these tumors—the inoperable case need no longer be considered incurable. To what extent radiation can replace operation in the favorable case cannot be determined from our material, for few of the cases seen by us had lesions technically within the scope of surgical excision; the few exceptions were represented by patients whose advanced age or impaired general health rendered them unsuitable for surgical treatment. The Coutard method must be considered a radical therapeutic procedure and as such cannot be undertaken without careful study and preparation of the patient. It cannot be carried out in a routine fashion but on the contrary requires a high degree of individualization.—*Garcia, Schlosser and Marino, New Orleans M. & S. J., May '46.*

Hay Fever Complications—1. There is a distinct tendency among hay fever sufferers to develop additional sensitivities, the most common being to pollen which occurs during another season than that which he already suffers. Thus, a patient with one season of hay fever beginning in September commonly develops additional hay fever beginning at some earlier date. As a result, there are many patients who begin having hay fever in the spring and continue until late fall, little realizing that they are simply passing from one otherwise well-defined season into another throughout the spring, summer and fall months.

Patients also tend to develop sensitivities to inhalants other than pollen, such as dusts of different kinds and animal danders, which fact must certainly be realized by the physician and patient, and steps taken accordingly if the best possible results are to be had in the treatment of hay fever. The development of additional sensitivities is something for which the hay fever patient is always a definite candidate.

2. Asthma is a common complication of hay fever, and, in turn, of course, asthma itself has definite complications. It has been variously stated that between 30 to 60 per cent of hay fever victims develop asthma as a complication.

3. Sinusitis is not an uncommon complication. An allergic reaction produces swelling and, since this allergic reaction of hay fever involves not only the nasal mucous membranes but those of the sinuses as well, sufficient obstruction may result to prevent free drainage. In the absence of free drainage, infection results.

4. It is an accepted fact that certain diseases, notably deficiency diseases and acute infections, inhibit developmental growth. Likewise there has been considerable, if not positive, evidence that active allergy, perhaps through a disturbance of mineral metabolism and the proper utilization of other food substances such as vitamins, also serves to prevent proper developmental growth . . .

The patient frequently asks, "Can you cure me?" For the average patient and in the sense that he will *never* have hay fever again, the answer is obviously "no"; not any more than we can "cure" diabetes, hypertensive heart disease, chronic glaucoma or many other noninfectious, nonacute, nonsurgical diseases. The hay fever patient has to decide between one of two things: (1) do nothing about his condition . . . and very likely become worse or, (2) have his hay fever treated (managed) for varying lengths of time at varying time intervals and be comparatively well. He has to decide whether he wishes no loaf or perhaps three-fourths or nine-tenths of a loaf. Hay fever can usually be adequately controlled in an intelligent, cooperative patient but there is no magic wand. The time to start hay fever treatment is always *now*. "Now" may be any time. It may be at the height of the patient's season. It may be ten months before the season—or at any time in between. For best results the average patient should begin treatment at least two months before the onset of his next hay fever season and should be treated perennially.—*Fleming, Texas State M. J., April '46.*

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ACUTE BARBITURATE POISONING

Percy and LaDue investigated and reported in the Southern Medical Journal 49 cases of acute barbiturate poisoning seen at the New Orleans Charity Hospital from 1938 to 1943. "In recent years there has been extended use of various malonylurea derivatives as sedatives by both physicians and laymen, and accordingly a marked increase in accidental and suicidal intoxication..."

"It is essential that all physicians consider the possibility of acute barbiturate poisoning in any patient admitted to the hospital in coma since without a history of ingestion of barbiturates the diagnosis is rarely self-evident and is made only after exclusion of the numerous other causes of coma, such as diabetic coma, uremia, cerebro-vascular accidents, head injuries, virus infection of the central nervous system, alcoholism, and so on.

"Usually the patient is comatose but may exhibit marked psychomotor stimulation. The pupils are contracted or dilated with a sluggish or absent accommodation to light. The respirations may be slow and shallow, or rapid and shallow, and cyanosis

is not uncommon. The reflexes are usually sluggish or absent. The blood pressure is generally lowered and the pulse rapid and thready. Death occurs following respiratory arrest, circulatory collapse or at a later date from bronchopneumonia or other pulmonary complications... The fatal dose of the barbiturates is generally 15 to 30 times the therapeutic dose of a given preparation."

Percy and LaDue tell us that the overdosage was intentional in eighteen patients and accidental in thirteen. Ten were alcoholics or drug addicts. In eight cases the reasons could not be determined.

The authors advise that "gastric lavage should be done routinely at the first possible moment even if the patient has been in coma for hours, since pylorospasm and retention of the drug are not uncommon. The stomach should be lavaged three separate times with at least one quart of warm water for each washing. After the last lavage, two ounces of magnesium sulfate should be left in the stomach to promote rapid evacuation."

The drugs most effectively used by the authors were caffeine sodium benzoate, coramine, strychnine and picrotoxin. "Picrotoxin is apparently the most effective physiological antagonist to the barbiturates.

"Circulatory collapse should be anticipated for the first 24-48 hours and shock treatment carried out.

"Patent airway should be assured by the frequent suction of mucus. Dentures should be removed and the tongue must be kept forward.

"The foot of the patient's bed should be elevated to prevent aspiration pneumonia."

Of the 49 cases treated five or 9.8 per cent died. The causes of death were respiratory arrest, bronchopneumonia and uremia.

Percy and LaDue have well presented a subject which, for some years, has been of increasing importance. Any active practitioner may be confronted with such a condition at any hour, day or night, and therefore such a possibility should always be borne in mind.

Regulation and control of these drugs by legal enactment seems to be making progress, but it is slight and altogether too slow. And it is doubtful how much it can be speeded up. But one step can and should be

1. Percy, W. Edgar, and LaDue, John S.: Acute Barbiturate Poisoning, South. M. J., 38: 726 (November) 1945.

taken—the time has come when every physician who prescribes a barbiturate should write on the prescription: “Not to be refilled.” If these four short words were

put on every prescription for barbiturates it is almost a certainty that very soon addiction to and deaths from these potent drugs would decline sharply.

TRANSACTIONS OF THE ASSOCIATION

1946 SESSION

(Concluded)

Last Day, Thursday, April 18

The Association, sitting as the Board of Health of the State of Alabama, was called to order at 8:30 A. M. by the President, Dr. Walter F. Scott.

The report of the Board of Censors was rendered by the Chairman, Dr. E. V. Caldwell, Huntsville.

THE SEVENTY-SECOND ANNUAL REPORT OF THE STATE BOARD OF CENSORS, INCLUDING ITS REPORTS AS THE STATE BOARD OF MEDICAL EXAMINERS AND AS A STATE COMMITTEE OF PUBLIC HEALTH

E. V. Caldwell, M. D., Chairman

In keeping with Constitutional provision, the State Board of Censors has the honor to submit to the Association its Seventy-Second Annual Report.

PART I

AS A STATE BOARD OF CENSORS

Because of war conditions and at the request of the Office of Defense Transportation it was determined not to attempt a meeting of the Association in 1945. This action of necessity threw greater responsibility onto the officers of the Association, particularly the Board of Censors. Board members have willingly assumed this added burden and have conscientiously transacted the affairs of the Association. There being no precedent to follow, the Board, after mature consideration, concluded the proper procedure was for officers whose terms expired in 1945 to continue in office until their successors are elected. Adjustments are to be made at the 1946 meeting of the Association with reference to tenure of office for those whose terms expired in 1945.

The Postwar Planning Commission appointed by the President of the Association, with Dr. M. S. Davie serving as Chairman, has done an outstanding service for organized medicine and the people of Alabama. The report of this important Commission will be found elsewhere in the transactions and every physician is urged to study

it with determination to do all that is possible in successfully carrying out suggestions made.

THE PRESIDENT'S MESSAGE

The President, after graciously expressing his thanks and appreciation for the honor conferred by his election, proceeded to indicate his gratitude for the cooperative assistance given him by the officers of the Association. He complimented the personnel of the Department of Health for the praiseworthy manner in which difficult situations have been handled. He commended the Woman's Auxiliary for its admirable work.

The actual opening of the four-year Medical School in Birmingham was referred to as the most outstanding event of the last two years. He spoke of the hardships, trials, tribulations and disappointments overcome before the school came into existence. He expressed everlasting gratitude of the medical profession and the citizens to Dean Roy R. Kracke for his accomplishment of what many thought was the impossible.

He paid glowing tribute to the Postwar Planning Commission and extended to it thanks of the Association.

He expressed his gratitude for the successful manner in which the special committee obtained funds for the painting of portraits of Dr. Partlow and Governor Sparks as an expression of appreciation for their efforts in obtaining a four-year Medical School in Alabama. The portraits were unveiled, with appropriate ceremonies, during this meeting.

The recommendation of the President as to eligibility of members to hold office involves an amendment to the Constitution of the Association and must lie over for one year before action is taken.

The Board approved the recommendation that the Association pay expenses of guest speakers at its meetings, limiting the amount for such purpose to \$500 annually, including the Jerome Cochran Lecturer.

The recommendation relating to the Association paying for expenses at its annual sessions involves an amendment to the Constitution and will lie over one year before consideration by the Board.

The Board approved the recommendation of the President to discontinue sectional meetings. It added the recommendation that the President

each year, in building his program, make an effort to have various divisions of medicine represented on the program.

When considering the recommendation that action be taken relative to medical care of veterans in private hospitals by private physicians, the Board expressed belief that it is a very worthwhile service. It is suggested that the question be referred to the Postwar Planning Commission for further study and recommendation at a later date.

The Board was reminded that the Association's Committee on Tuberculosis Control was discontinued a few years ago since the Division of Tuberculosis Control in the State Department of Health had become so well organized and is now functioning under the State Committee of Public Health. It, therefore, suggests that the recommendation of the President for the appointment of a Standing Committee on Tuberculosis Control is not indicated at this time to be necessary.

The Board recommends that expression of the Association's gratitude to its President for the last two years, in not only holding the organization together during stressful and trying times but going forward apace with the developments of the age, be extended him.

The Association approved the comments of the Board on the President's Message.

REPORTS OF VICE-PRESIDENTS

Each of the Vice-President's reported difficulties encountered in having divisional meetings and attending county medical society meetings. They reported, however, that county medical societies are functioning well as a rule. Emphasis was placed upon the importance of having strong county societies with regular meetings if the Association is to be strong.

Attention was directed to the work of the Postwar Planning Commission and the importance of the medical profession diligently studying provisions for prepayment medical, hospital and obstetric care plans. It was urged that Legislators and the public be appraised of the attitude of physicians toward socialized or political medicine with practical reasons therefor.

Reports of the four Vice-Presidents are approved by the Board and recommended to the Association members for careful study and appropriate action.

The recommendation of the Board was approved.

REPORT OF THE SECRETARY-TREASURER

The Secretary in the opening paragraph deals with the cancellation of the 1945 meeting of the Association.

It is recommended that the Association's hundredth anniversary be appropriately celebrated.

It is considered appropriate that due recognition be given the 295 Alabama physicians who answered the call to serve with the armed forces

during World War II. An appropriate welcome is due the 205 who have returned to the State and fitting resolutions from the Association sent to the families of those who made the supreme sacrifice in the service of our country. Commendations should also be sent to the six physicians from Alabama who received citations for gallantry and meritorious achievement.

It is urged that every eligible physician in the State be given ample opportunity to become affiliated with his county medical society, since 86.16 per cent are now identified with the Association.

Attention is directed to the fact that seventy-five members have been claimed by death since the 1944 meeting of the Association. Included in this number were six Life Counsellors, three Active Counsellors and sixty-six other members. The Association mourns the loss it sustains in the passing of these individuals.

Once again the audit of the Treasurer's books indicates that the finances of the Association have been handled strictly according to authority granted by its mandates.

The Board recommends approval of the report of the Secretary-Treasurer.

The Association approved the Board's recommendation.

COMMITTEE OF PUBLICATION

It is gratifying to observe by this report that the Journal of the Association has been more than self-sustaining, showing a profit of \$1897.92 in 1945.

The Board recommends approval of the report of the committee and expresses appreciation to the editorial staff and all who contributed to the accomplishments made through our Journal.

The Board's recommendation was adopted.

Compensation of the Editor-in-Chief of the Journal

The attention of the Board was called to the fact that the Editor-in-Chief of the Journal is required to devote extra time at night and on Sundays to editing the Journal, for which his compensation is, at present, \$33.33 monthly. The Board feels that inasmuch as the Journal is paying its own expenses that the Editor-in-Chief should be raised to \$50.00 a month and it so recommends.

The recommendation of the Board was adopted.

REPORTS OF STANDING COMMITTEES

PUBLIC RELATIONS

The report of the Committee on Public Relations has the approval of the Board which recommends active participation by each county medical society in acquainting the entire population with legislative and other activities in which the profession is interested. The Board recommends approval of the report as submitted.

The Association approved the Board's recommendation.

MATERNAL AND INFANT WELFARE

This report relates an analysis of statistics on births and maternal and infant deaths during the past two years. It calls attention to the lowered maternal mortality in spite of inadequate hospital facilities and reduced medical personnel.

The committee requests a prominent place on the program of the county, district and state meetings to discuss maternal and infant welfare problems. It urges that more serious consideration be given maternal mortality, and calls attention to the postgraduate seminars being held at the Medical College of Alabama.

The Board commends this committee for its diligence and persevering efforts to claim the attention of the profession for maternal and infant health.

The Board concurs in the recommendation of the committee that an obstetrician be employed to direct maternal health clinic organization. However, the Board recommends that no more section programs be held at the meetings of the Association, but endorses the principle of the committee's recommendation that obstetrics and gynecology be given an equal amount of time and publicity that is allowed other sections in the State Journal, programs, and elsewhere.

The Board urges approval of the request of the committee that county, district and state meetings assign at least one paper each year to obstetrics and gynecology.

The Board recommends approval of the committee's report with the exception of the recommendation regarding sectional meetings.

The Association concurred in the Board's recommendation.

POSTGRADUATE STUDY

This committee reminded the membership that it had sponsored courses of instruction, using the circuit system, instruction being given by faculty members of the Tulane University of Louisiana. Each year approximately thirty-three counties were reached with an average enrollment of 200 physicians. These courses apparently were well received but were discontinued in 1943 due to shortage of instructors and limited travel facilities.

The committee raised the question whether the Association should revive the type of postgraduate instruction given in the past or support only the successful postgraduate seminars that have been sponsored by the Medical College of Alabama. The Board recommends that the former method of postgraduate instruction, using the circuit system, be revived when it is felt the faculty members of the Medical College of Alabama are in position to begin the instruction. The seminar is recommended most heartily whether or not the circuit system is again adopted.

The recommendation of the Board was adopted.

CANCER CONTROL

This committee under the able chairmanship of Dr. J. P. Chapman has done outstanding work

and is to be commended for the splendid accomplishments attained. The report indicates that two active years have been spent by the committee and greater attainments may be expected as a result of its activity.

The educational work of the Field Army of the American Cancer Society is greatly appreciated. The resolution commending Mrs. Ray Meade for her services as State Commander of the Field Army is recommended for a favorable consideration.

The Board approves the creation of a Division of Cancer Control in the State Department of Health with a full-time administrator and adequate clerical assistance; the creation of a cancer commission as suggested by the committee to operate in conjunction with the committee; the establishment of a state program for care of terminal cancer patients; and the establishment of cancer clinics.

The Board recommends the adoption of the report.

The Association approved the Board's recommendation.

ACCIDENTS AND INDUSTRIAL HYGIENE

This committee advised there was no report to make due to stressing busy times. Its recommendation that the incoming President appoint another chairman is referred by the Board to the new President for whatever action is desired.

ARCHIVES AND HISTORY

This committee has continued its work in collecting museum material which, as in the past, has been kept in the State Department of Archives and History in Montgomery. It recommends that, inasmuch as we now have a four-year Medical School with a museum, the Association authorize the committee to transfer the material at the Department of Archives and History to the Medical College of Alabama, and that it be donated to the Medical College. The committee continued its function collecting and placing in this museum, from time to time, interesting historical material.

The Board commends the work of this committee and recommends that the Association authorize the transfer and donation of this material to the museum of the Medical College of Alabama, and that this committee continue its activities as in the past and that the medical profession of Alabama give the committee its fullest cooperation in the collection of material; and further recommends that any historical works now in existence or might come into existence that would add to the medical history of the profession of Alabama be encouraged to come into the hands of this committee.

The Association approved the Board's recommendation.

PHYSICIAN-DRUGGIST RELATIONSHIPS

This committee reported its first step was to become acquainted with representatives of the pharmacists and discuss harmonious cooperation of the two groups. The committee has published articles in the Association's Journal and ex-

changed Journals with the Alabama Pharmaceutical Association. Annual meetings of the Jefferson County Medical Society and the Birmingham druggists have been held for the past two years with a barbecue planned for this year. Pharmacists have been invited to attend our annual meeting this year.

The Board suggests approval of the committee's recommendations.

The suggestion of the Board was concurred in.

MENTAL HYGIENE

The Committee's continuing interest in mental health deserves the commendation of the Association.

The expression of the Board was endorsed.

PREVENTION OF BLINDNESS AND DEAFNESS

No report was submitted by this committee.

POSTWAR PLANNING COMMISSION

This Commission was appointed by our President and includes the Secretary of the Association, the four Vice-Presidents, Dr. Carl A. Grote, the State Health Officer, and Dr. M. S. Davie, Chairman. The serious work of the Commission and its accomplishments are a tribute to President Scott and his wise judgment in selecting the Chairman. Every member has endeavored to be of real service and has made many sacrifices to get facts and put into practical application certain established principles.

The success of the Commission in securing the passage of the state legislation to give the people of Alabama an adequate hospital system under local control and a voluntary prepayment plan for hospital, medical and obstetric care which would meet all requirements is commended.

The publication of the booklet titled, "Health and Medical Care in Alabama," is the result of the work of the Commission, cooperating with the State Planning Board, the State Department of Health, the State Hospital Association, the Alabama Nurses Association and the State Dental Association.

The Board recommends careful study of the Commission's reports and continued cooperation of the physicians in Alabama to the end that satisfactory medical care plans will be put into practice.

The Association approved the recommendation of the Board.

SPARKS-PARTLOW PORTRAIT FUND

A fund of \$2,558 was secured from physicians and friends for portraits of Governor Chauncey Sparks and Dr. W. D. Partlow to be presented to the Medical College of Alabama. They were presented with appropriate ceremony at noon Wednesday, April 17, 1946. They were accepted by President Raymond R. Paty for the University and Dean Roy R. Kracke for the Medical College of Alabama.

The Board commends this committee for its excellent accomplishment in procuring these portraits for the people of Alabama with funds secured from members of the Association and interested citizens.

MEDICINE AND THE WAR

PHYSICIANS IN WAR AND POSTWAR PERIODS

Two hundred ninety-five Alabama physicians have rendered service in the armed forces of the United States of America since the second World War was declared. Two hundred and five of these have returned to the State to engage in practice. In spite of the return of these physicians and one hundred-six who have located in Alabama since "V. J. Day" there are more than sixty communities from which requests have been made for additional doctors. It is interesting to note that sixty-four of the one hundred-six physicians are Alabamians and forty-two were from other states, and licensed by reciprocity. The war-time burden has not been lifted for many physicians in the State and unless others being licensed or returning from the service locate in the places where they are urgently needed no one can predict the hardship to be borne in many communities because of lack of medical care.

An adequate number of well qualified physicians is essential for improving the health of the people of the State. A study of the supply and distribution of physicians in Alabama has been made and certain conclusions regarding the steps necessary to improve the situation have been reached. It is considered essential that there be one physician per thousand population if adequate medical care is to be provided. It is recommended that one physician per 1500 population is required to render minimum medical care. Physicians in Alabama are concentrating in the urban areas and are not locating in the rural communities. It is gratifying to observe that in recent months several young physicians have located in small towns. The physician-population ratio in most Alabama counties is below the minimum standard. Specialists are located in the larger cities and care for populations in the adjoining areas. Another observation is that the older age groups of physicians are serving in the smaller towns and rural areas. Conditions in the rural areas are more acute but many urban centers are also adversely affected in lack of adequate medical care.

It is observed that there are four important factors influencing the location of physicians. These are: 1. Community wealth; 2. Hospital facilities; 3. Availability of specialists, and 4. The character of the community. The solution of the problem of physician distribution in Alabama therefore rests on: 1. Physicians graduating from the medical school and locating in the State; 2. Improvement in per capita income, roads and educational opportunities; 3. Provision of more hospital facilities; 4. Getting specialists more readily available, and making office space and living quarters available.

The report of the Postwar Planning Commission of the State Association should be studied by every physician and an all-out effort should be made to encourage physicians to locate in communities where needed to promote improvements that will induce them to do so.

PROCUREMENT AND ASSIGNMENT SERVICE

This service was continued through the two years included in this report. Much time and effort were spent in attempts to get physicians released from the service for locating in communities urgently needing their services. These efforts met with little success. A few physicians, however, were induced by persuasion to locate in certain communities and to engage in industrial practice. Considerable time was spent by the State Chairman of Procurement and Assignment and his Secretary in keeping the records and classifications of physicians up to date and handling quotas for internes and residents in hospitals.

The State Procurement and Assignment Service was terminated March 31, 1946. Henceforth all matters pertaining to physicians in the armed forces are to be handled directly with the Surgeon General of the Service involved.

STATE DEFENSE COUNCIL

As the war progressed and came to a successful conclusion it became more evident with the passing of time that there was less need for this service. Nevertheless, the Medical Division of the Office of Civilian Defense remained intact throughout the war period and was prepared for execution of plans for emergency medical service. The medical resources and facilities were complete and medical supplies were available to augment those in the local areas when and if needed. The emergency base hospitals remained the same as published in the report to the Association in 1944. The medical supplies of the Office of Civilian Defense were stored for use when and if needed. No major disaster occurred and but few of minor nature with only local involvement happened. Fortunately only one of these required the services of supplies furnished by the Office of Civilian Defense. Grateful appreciation to the physicians, nurses and hospitals for their participation in this preparedness program has been expressed.

STATE LEGISLATION

The Governor, in his Message to the 1945 Legislature, said: "Health is vital. We should look forward to the health of our people, to hospital facilities, clinics, nursing homes, and other things which we shall need to incorporate in our public welfare service. Next to education health is probably one of the most essential functions of government. We are building in Birmingham a medical school based upon the high conception that the profession of medicine is a public service. We must integrate with that thought our program of regional hospitals for both pay and indigent patients, nursing homes for the indigent aged, clinics for detecting and preventing diseases, homes for crippled children, and other activities which will bring our people to a higher plane of health and happiness. We shall not have the funds to do all we would like; but I know of no better time to begin than through this Legislature, which has a true conception of public welfare services and needs."

Following the leadership of the Chief Executive, the Legislature responded favorably to the appeals of the State Health Department. The most important of its actions in the field of public health are briefly summarized as follows:

Appropriations: For each of the fiscal years to end September 30, 1946 and September 30, 1947, the sum of \$817,400 was appropriated—\$125,000 of which was made conditional upon approval of the Governor. Of this portion, \$50,000 is for the study and treatment of cancer, and it is being made available as need is indicated. The remaining \$75,000 was asked for primarily to enable the department to reabsorb men returning from service, and here again such part as is necessary is being made available.

There is reference elsewhere to appropriations contemplated in connection with general hospital and tuberculosis sanatorium construction.

Act No. 50 relating to non-profit hospital and medical care corporations: Existing statutes were amended to enable non-profit hospital corporations to include medical, surgical and obstetric coverage in their plans. The legislation provides also for representation in an active way from the State Medical Association.

Act No. 195 more clearly defines the responsibility of counties and municipalities in the matter of pounds that are to be provided for use in connection with the State's dog control activities; and authorizes the employment of rabies inspectors on a full-time basis.

Act No. 210 is a constitutional amendment that would authorize the State to engage in hospital construction. While the amendment is to be voted on at the next general election, legal opinion is that such endeavor on the part of the State would not be in violation of any part of the Constitution of Alabama.

Acts No. 211 and 287 deal with general hospitals and tuberculosis sanatoria, the details of the legislation being discussed elsewhere in the Board's report. It should suffice to say here that one of the intents of the Acts is to place Alabama in position to enjoy the financial benefits of the Hill-Burton Bill relating to hospital construction when the Bill has been enacted by Congress.

Act No. 289 makes it unlawful for school authorities to employ teachers, janitors, food handlers or bus drivers who have tuberculosis in an infectious stage; and places upon Boards of Education the responsibility of requiring those mentioned to be examined at least once in three years, the initial examinations to be had within one year from the date the Act became operative.

Act No. 360 amends the Vital Statistics Law in such way as to provide for compensation of local registrars of births and deaths on a quarterly basis rather than monthly.

Finally, record should be made to the failures in the department's legislative program. For about the fourth time, it was not found possible to interest the legislative majority in the physical examination of both parties to a marriage contract. While the proposed Bill met approval in the Senate, it was defeated in the House.

The only other rebuff was associated with legislation intended to deal with the problem of prostitution. Members of the Legislature felt the proposals were too drastic, and yet no half-way measures could be proposed to control the evil. The answer, through legislative means, is not apparent.

The State Department of Health desires to record its appreciation of the courtesies accorded its representatives by members of the 1945 legislature. Even in the midst of differences there was good feeling, and an evident desire to do the best thing for the people of Alabama was manifest.

FEDERAL LEGISLATION

There are more than one hundred bills dealing with health and medical care now before the Congress of the United States. Many of these will be combined with others before actual passage. Some may never be passed. The number introduced, however, indicates the interest that is manifest throughout the country in the health and medical care problems confronting the American people.

A few of these bills are of special interest and are discussed elsewhere in the transactions of this meeting. They refer especially to hospitalization and prepayment plans for medical care.

All of the bills merit the careful, intelligent study of every physician who should communicate with his congressman and express his views regarding their value.

FEDERAL AGENCIES

The U. S. Public Health Service has continued the same cooperative relationship as heretofore. This agency has contributed funds to the State and local health departments and has assigned personnel to the State for the purpose of rendering public health services at whatever points the State Health Officer designated.

The Children's Bureau of the U. S. Department of Labor has contributed funds to the State for promoting health service at State and local levels. The funds of federal agencies are allocated to the State and paid into the State Treasury quarterly in conformity to approved budgets for public health services. Emergency Maternity and Infant Care program of the Children's Bureau continued in effect with services being rendered every county.

Dr. E. L. Bishop, Director of the Health and Safety Division of the Tennessee Valley Authority, has continued with the same cooperative spirit as in the past. That agency carries on extensive health and safety activities with employees of the Tennessee Valley Authority. To do this work the Authority employs physicians, nurses, engineers, laboratory workers and safety personnel.

The Farm Security Administration has continued its program as reported by the Board in previous years. This agency loans money to its clients to pay for medical, surgical, obstetric, dental and hospital care, and supplies necessary drugs. The program has been approved by the State Medical Association and must be approved

by each county medical society and accepted by the physicians, dentists, druggists and hospitals in the counties involved before it is effective.

The program of the Field Army of the Cancer Society continued its phenomenal growth in each of the two years. It attained a goal of \$37,335.85 in 1945, \$28,302 of which was used in Alabama for educational purposes. The balance was sent to national headquarters to be used for research. The Association's Committee on Cancer Control has worked wholeheartedly in cooperation with the Alabama Field Army of the American Society and acceleration of its accomplishments can be justifiably attributed to the understanding and mutual cooperation of the two groups.

RESEARCH AND SPECIAL ACTIVITIES

RABIES STUDY

The laboratory for the study of epidemiology and prevention of rabies was continued by the Rockefeller Foundation through December 31, 1945. The project was terminated at that time because "the primary objectives of the study have been realized and though there is never an end to the investigation problems for any disease, these problems do not warrant continuation of this project."

During the years 1944 and 1945 the field rabies control work was intensified. In 1945 a public health veterinarian was added to the staff. The cost of his services is borne jointly by the State Department of Agriculture and the State Department of Health. He does promotional work throughout the State in an effort to see that the Dog Control Act for the suppression of rabies is carried out. He has been quite successful in his endeavors, particularly in two counties that have heretofore failed to enforce the law and which have been the two major foci of rabies in the State. With the backing of the State Health Officer and the State Veterinarian, the public health veterinarian has succeeded in getting ordinances adopted providing for licensing of all dogs in Birmingham and Mobile which provide revenue for satisfactory pound work.

A rabies inspector has been appointed in each county and provisions increased for the enforcement of the law requiring vaccination of all dogs. The public health veterinarian assists in this control work by encouraging rabies inspectors and promoting educational programs. Effort is being made to obtain city ordinances for licensing of dogs in other cities of the State. Dog pound work has been inefficient in nearly all cases as the state law does not provide for special revenue for this type of work. Enforcement of the dog license law will provide needed revenue and license is not issued until owner presents an official vaccination certificate.

Fox rabies has continued to be a problem in several counties. Many domestic animals have been bitten and one man succumbed to rabies as a result of fox bite in spite of the fact that he received rabies vaccine, beginning treatments in less than ten hours after being severely bitten. A paper on fox rabies was published at the

Laboratory and widely distributed. The Federal Wild Life Service is cooperating in the endeavor to eliminate rabies in foxes.

The experimental and field studies conducted at the Rabies Laboratory have done much to stimulate interest in rabies control. The experimental studies of canine rabies vaccination completed in 1945 present additional evidence that vaccination of dogs can be an important factor in rabies control. The study of the duration of immunity showed that dogs tested one year after vaccination still maintained a high degree of resistance to infection. In fact, eighty-eight per cent resisted infection at the end of one year. The results are clear cut and furnish satisfactory proof that the vaccination method used should be satisfactory for large scale control work where vaccination is repeated on an annual basis.

The emphasis now must be placed on control work. The prospects are encouraging that the control work will become increasingly effective. The medical and allied professions, together with the general public, are urged to cooperate with the State public health veterinarian and rabies inspectors to the end that rabies, as a threat to animal and human life, may be reduced to a minimum.

SLOSSFIELD HEALTH CENTER

The program begun as a demonstration of Negro health work in Jefferson County in 1936 was continued through the two-year period included in this report. The project is educational for the Negro physicians of Jefferson County as well as a means to provide health services to a rather low income section of the Negro population.

The Slossfield Health Center program is supported with local public and private funds in addition to state and federal appropriations. Clinics are conducted by local Negro physicians and dentists under the auspices of the Jefferson County Health Department, with white physician specialists supervising the specialistic services. These include clinics for tuberculosis, venereal diseases, maternal and child health, and dentistry.

The program has made definite progress and has proved its worth in the three-fold purpose for which it was begun; namely, 1. To develop a teaching center for Negro physicians and nurses; 2. To elevate the standards of obstetric and neonatal care given by physicians and nurses; and 3. To demonstrate that adequate maternity care will reduce maternal and infant morbidity and mortality.

Complete maternity and child health services are provided at the center which include home and hospital delivery, clinic and home visiting by physicians, nurses and medical social case workers, and dental care. Obstetric consultants determine which patients will be delivered at their homes or in the ten-bed maternity hospital at the center.

Two intensive educational conferences, each lasting one week, were held for Negro physicians from nearby states. These consisted in lectures, demonstrations and practical experience, with

the consultant staff serving as instructors. Highly favorable comments were made by the Negro physicians who attended each of these institutes. This health center continues to serve admirably for field training of Negro professions, including physicians, nurses, dentists, and social case workers. The present Negro director is assigned to the State from the U. S. Public Health Service.

TUSKEGEE NURSE-MIDWIFE TRAINING SCHOOL

Despite discouragement the activities of the Tuskegee Midwifery School made a creditable showing for the years 1944-1945. Seven students completed training in 1944 and two in 1945. A new student manual and bulletin of the school was prepared in 1945. The staff remained fairly stable for the two years. The director resigned at the end of July 1945 and was replaced August 10th by a qualified supervisor for the field service. A Negro nurse-midwife was employed as instructor in the school. In order to more closely integrate the midwifery instruction in the Tuskegee Institute it is planned to combine in one person the responsibility of midwifery instruction and supervisor of maternity service in the John A. Andrew Memorial Hospital. Half of the salary of such a person will be borne by the hospital and half by the midwifery school. The Federal Children's Bureau provides the budget for the midwifery school. The Macon County Health Officer has administrative responsibility for the school. The instructor was granted six month's study leave April 1st to secure additional preparation. No students will be accepted until she returns.

MOBILE APPEALS

On November 17, 1945 the applications for membership in the Mobile Medical Society of Drs. E. T. Doehring, H. N. Webster, Jr., Guv H. Williams, H. C. McClure, George J. Mitchell, L. L. Brown, W. G. Minnich, A. A. Amendola, Walter S. Parsons and S. A. Zieman were considered and voted upon by that society and all ten of the applications received the constitutional number of blackballs or more. That denied them membership in the Mobile County Medical Society. From this act of the Mobile County Medical Society the following doctors appealed for the doctors listed opposite their names

<i>Appellant</i>	<i>In behalf of</i>
Dr. H. S. J. Walker	Dr. E. T. Doehring
Dr. S. H. Stephens	Dr. H. N. Webster, Jr.
Dr. L. W. Hollis	Dr. Guy H. Williams
Dr. L. W. Hollis	Dr. H. C. McClure
Dr. C. L. Rutherford	Dr. George J. Mitchell
Dr. G. O. Segrest	Dr. L. L. Brown
Dr. L. W. Hollis	Dr. W. C. Minnich
Dr. G. G. Oswalt	Dr. A. A. Amendola
Dr. G. O. Segrest	Dr. Walter S. Parsons
Dr. G. O. Segrest	Dr. S. A. Zieman

to the Medical Association of the State of Alabama for a hearing to show cause as to why the applicants were not accepted into membership

in organized medicine. These appeals were duly presented to the Association on the morning of April 16, 1946 and referred to the Board of Censors without discussion. The Board of Censors accepted the appeals so referred as being a matter over which the Constitution of the Medical Association of the State of Alabama gave it jurisdiction, and after appellants and all parties concerned were notified and duly issuing summons to those the Board deemed necessary to summon, giving all concerned the date, place and hour of the hearing, the hearing was held and directed according to constitutional regulations at 10 A. M. April 17, 1946 in the Emerald Room, Tutwiler Hotel, Birmingham, Alabama. All members of the Board were present throughout the hearing, except Dr. Partlow, who was present until he was forced to leave on account of other engagements, nine Censors remaining throughout the hearing and all appellants and all those responding to summons to be present being present. Nine appeals were heard conjointly by common consent of all appellants and members of the Board, and one appeal was considered separately because of special consideration pertaining to his appeal somewhat different from the nine others. The appeal of Dr. H. S. J. Walker for Dr. E. T. Doebling was voted on separately because Dr. J. D. Perdue wished to recuse himself from voting upon this particular appeal. The Board, after carefully reviewing and giving mature consideration of all evidence presented in the hearing of the appeals of

Dr. H. S. J. Walker for Dr. E. T. Doebling
Dr. S. H. Stephens for Dr. H. N. Webster, Jr.
Dr. L. W. Hollis for Dr. Guy H. Williams
Dr. L. W. Hollis for Dr. H. C. McClure
Dr. C. L. Rutherford for Dr. George J. Mitchell
Dr. G. O. Segrest for Dr. L. L. Brown
Dr. L. W. Hollis for Dr. W. G. Minnich
Dr. G. G. Oswalt for Dr. A. A. Amendola
Dr. G. O. Segrest for Dr. Walter S. Parsons
Dr. G. O. Segrest for Dr. S. A. Zieman

from action of the Mobile County Medical Society in denying them membership on November 17, 1945 found that in view of the fact that no evidence was produced against any one of these physicians appealed for, and authorized qualifications had been shown to comply with the Alabama law and the Constitution of the Medical Association of the State of Alabama, and no professional, ethical or moral reason offered for denying them membership, recommends that the Secretary of the Mobile County Medical Society be instructed to enroll the following physicians as members of the Mobile County Medical Society: Dr. E. T. Doebling, Dr. H. N. Webster, Jr., Dr. Guy H. Williams, Dr. H. C. McClure, Dr. George J. Mitchell, Dr. L. L. Brown, Dr. W. G. Minnich, Dr. A. A. Amendola, Dr. Walter S. Parsons and Dr. S. A. Zieman.

On motion, duly seconded, the recommendation of the Board was unanimously adopted by the Association.

AMENDMENTS TO THE CONSTITUTION

PROPOSED BY
DR. FRED WILKERSON

Dr. Wilkerson had the following to say before making his recommendation to the Association in 1944:

"For a number of years I have been distressed over the small number of young men in the Association who take any interest in the Association as such. Many of them should now be assuming positions of leadership within the organization and taking over some of the burdens from those who have been at the helm so long, but, until they were called into service, very few seemed concerned at all. On numerous occasions I tried to get at the bottom of this and to discuss the cause of their disinterest. The only concrete answer I have ever obtained is that many of them feel that the State Board of Censors is a more or less closed corporation, running the Association as it sees fit, with no chance for an outsider to break in. As one who has served fourteen years on that body and has known intimately all its members during that time, I realize now how utterly erroneous is such an impression. All the Board members that I have known have been actuated entirely by their interest in the Association, with no thought of political preferment for themselves. It is very unfortunate that this idea has become so widespread, but I am afraid it is very prevalent, particularly among our younger men.

"It has been the custom from time immemorial for the Association to elect to office men who have made good on the Board and these men have been excellent, in fact, invaluable members. In view of the feeling mentioned above, however, it seems to me that it might be advisable to limit the length of time that any one man may serve, so I recommend that the Association amend its Constitution by providing that no member can serve consecutively more than two terms of five years each. This would not preclude his election or appointment at a later date, but limiting the term of service in this manner would tend to meet the criticisms mentioned by giving more men the opportunity to serve, and thus create, I hope, more interest in the affairs of the organization. The injection of new blood from time to time, would, I believe, prove stimulating. Let me reiterate that this implies no criticism of any of the fine men who have served so faithfully and so well, but it is suggested as an effort to create more general interest among a large group of our members, who feel, mistakenly, I realize, that they are more or less on the outside, with little prospect of advancement in the Association. Their active interest would do much to help this fine body."

The Board heartily agrees with the idea expressed in this recommendation that new blood should be injected into the membership of the Board of Censors from time to time and that younger men should be added to the Board from time to time. The Board does not believe that this recommendation is necessary to accomplish

the above two objectives. The Board believes that the structure of that part of the Constitution dealing with this subject is now sound and provides all necessary opportunity for the Association to place new members upon the Board and/or young men upon the Board, two each year, if it so desires, but leaves the opportunity open to the Association to use the services, if it so desires, of men who have proven their devotion and soundness of judgment in the service of the State Medical Association for any length of time that the Association thinks desirable. The Board recommends to the Association that, in order to have younger men who would be eligible under the Constitution to be elected to the Board of Censors, the districts, in electing Counsellors, elect to counsellorship younger men with the qualifications this Association has always expected in the men who have been elected to the Board of Censors. If this be done by the districts annually, younger men with the qualities necessary to become members of the Board will soon find their way to seats on the Board of Censors. Therefore the Board recommends non-adoption of this recommendation.

It was moved, seconded and adopted that the Board's recommendation be concurred in.

RESOLUTIONS

INTRODUCED BY MORGAN COUNTY MEDICAL SOCIETY

Whereas, Although widely renowned for the accomplishments of its Health Department, Alabama has lost the services, during the last few years, of some of its most devoted personnel who felt constrained to accept offers elsewhere of salaries that Alabama could not match, and

Whereas, The State of Alabama has served, in such instances, as a training center for other states whose health departments were enabled to pay larger salaries, and

Whereas, In other instances individuals left the Health Department for industrial or other positions, for salaries far in excess of the maximum they could expect to attain in Alabama under the present set-up, and

Whereas, Many of the employees of the Health Department who remained on duty received offers of larger salaries elsewhere but stuck because of family ties, loyalty or other reasons, and many have felt themselves to be victims of injustice by reason of the fact that their incomes were static, and

Whereas, Some positions, vacated, were difficult to fill because better salaries were offered elsewhere, and such an attitude might be expected to militate against the most efficient replacement of personnel, and

Whereas, The people who had, or who accepted, positions with the Health Department in the last four or five years have, as a result, in many cases received less remuneration than they might have had elsewhere; and those people made our State the recipient of advantages resulting from their personal sacrifices; and the spirit of loyalty and patriotism undoubtedly helped to keep them, and

Whereas, Loyal Health Department employees have in some cases been penalized, financially, by holding their positions; and our people have suffered in other cases when positions were left vacant and inducements as to salaries may have blocked their satisfactory refilling, and

Whereas, Our State finances are reported to be in unusually good shape; and the personnel of our Health Department is composed of people whose ability is average and better, as a rule; and the positions now open should be filled by individuals of the highest type; now therefore be it

Resolved, That the Morgan County Medical Society request that the Medical Association of the State of Alabama, after due consideration, take such steps as are necessary to bring about a readjustment of salaries of Health Department employees; that the budget be expanded, if indicated, when the proper time is at hand; that additional funds be obtained when and as needed, if such is the answer to the problem; that such salary levels be maintained so as to equal (at least) the average

for the South, and to be reasonably attractive to prospective applicants; and that increases commensurate with ability and accomplishment be provided.

This resolution requests that the Medical Association of the State of Alabama, after due consideration, take such steps as are necessary to bring about a readjustment of salaries of health department employees; that the budget be expanded, if indicated, when the proper time is at hand, that additional funds be obtained when and as needed, if such is the answer to the problem; that such salary levels be maintained as to equal at least the average for the South, and to be reasonably attractive to prospective applicants; and that such increases be commensurate with ability and accomplishment be provided.

The Board is in hearty sympathy with the spirit of this resolution and its recommendation, and recommends that the Association go on record as endorsing this resolution.

The resolution was unanimously endorsed by the Association.

INTRODUCED BY DR. J. P. CHAPMAN

Whereas, The Alabama Division of the Field Army of the American Cancer Society has done outstanding educational work in cancer control; and

Whereas, Every county in the State has become well organized for cancer control education under the inspiring leadership of Mrs. Ray Meade, the State Commander of the Field Army; and

Whereas, The Field Army has cooperated enthusiastically with the Association's Committee on Cancer Control to the end that there is much evidence of ever increasing intelligent "cancer consciousness" throughout the State; now therefore be it

Resolved, That the Medical Association of the State of Alabama, meeting at Birmingham, April 18, 1946, express appreciation for the continuing active, enthusiastic, and intelligent services of Mrs. Ray Meade, State Commander of the American Cancer Society.

The resolution was adopted by the Association.

INTRODUCED BY DR. A. A. WALKER AND DR. B. W. McNEASE

Whereas, There is now pending before the Congress of the United States legislation pertaining to the medical care of the American people, and

Whereas, This legislation is of such revolutionary character as to be a matter of grave concern to the physicians of this country, and

Whereas, The American people under the present system enjoy the highest level of medical care and general health of any nation in the world; now therefore be it

Resolved, That the Medical Association of the State of Alabama enter its protest against all efforts designed to place the health care and wellbeing of the American people under political control.

The Board endorses the resolution and recommends its adoption.

The resolution was adopted.

COMMUNICATIONS

FROM THE A. M. A.

A letter from the American Medical Association states that the Board of Trustees had been authorized to appoint a National Emergency Medical Service Committee. At a meeting of the House of Delegates held in December 1945 this committee had requested the Board of Trustees to give it permission to suggest that each constituent State Medical Association appoint a similar committee and give publicity to it. The

Board of Trustees approved this request, and the State Board of Censors recommends approval of this committee and suggests that the incoming President appoint this committee according to this request.

The recommendation was approved.

FROM THE WOMAN'S AUXILIARY

A communication from the Woman's Auxiliary asks the support of its President and President-Elect in their efforts to organize units of the Auxiliary in counties not now identified. The Board recommends the endorsement of the request.

The Board's recommendation was endorsed.

FROM DR. C. L. LAMAR

Dr. Clifford Lamar, as State Chairman of the American Academy of Pediatrics, seeks approval of a survey of pediatric needs and facilities to be made in Alabama, and the Board recommends endorsement.

The Association approved.

Part I of the Board's report was adopted as a whole.

PART II

REPORT OF THE BOARD OF CENSORS AS A BOARD OF MEDICAL EXAMINERS FOR 1944

In this field of its activity the Board makes the following statistical report.

Certificates of qualification issued physicians 54

(a) Physicians passing examination Oct. 24-26, '44	8
(1) Certificates issued	5
(2) Certificates to be issued after internship	3
(b) Certificates issued after completion of internship July 1, '44	16
(c) Physicians granted reciprocity	30
(d) Diplomates of the National Board of Medical Examiners licensed	3
(e) Physicians denied narcotic privilege	5
(f) Chiroprody renewal certificates issued	29

CERTIFICATES ISSUED TO OCTOBER 1944 EXAMINATION APPLICANTS

Blalock, John B.	Lee, Annie L.
Culver, Perry J.	Parsons, Walter S.
Kirby, Joseph L., Jr.	

CERTIFICATES TO BE ISSUED AFTER SATISFACTORY INTERNSHIP

King, Robert T.	Randall, Fay M., Jr.
Malone, John M.	

CERTIFICATES ISSUED APPLICANTS COMPLETING INTERNSHIP JULY 1, 1944

Blue, Denzil R.	Hardwick, James L.
Brown, Clyde W.	King, Hiram G.
Childs, Edward A.	Odom, Corley W.
Crabtree, James C., Jr.	Smith, William L.
De Lorme, Thomas L., Jr.	Stanton, Allie M.
de Wilton, Edward L.	Thomas, Benjamin F., Jr.
Dunning, Everette J.	Thompson, William D.
Greenless, David L.	Ward, James K.

PHYSICIANS DENIED NARCOTIC PRIVILEGE

Hughes, Brady A., Tarrant (Jefferson)	Dec. 18, '44
Lilly, Robert E., Hueytown (Jefferson)	May 1, '44
Owen, Herman G., Flat Creek (Jefferson)	Mar. 9, '44
Roberts, John M., Vernon (Lamar)	May 8, '43
Stringer, M. S., Florence (Lauderdale)	May 14, '44

RECIPROCITY APPLICANTS RECEIVED DURING THE CALENDAR YEAR 1944

Allison, Grady M.—Tenn.	Sept. 29, '44
Amendola, Arthur A.—Tenn.	July 1, '44
Bender, Theodore J., Jr.—Miss.	July 27, '44
Berry, Joseph A.—Ill.	Oct. 17, '44
Chapman, Frank E.—La.	Feb. 25, '44
Chenault, John M.—N. B. M. E.	Nov. 29, '44
Dale, Henry Leo—Tenn.	Dec. 28, '44
De Armas, Charles R.—La.	May 16, '44
Dickson, Carolyn H. L.—Va.	Dec. 13, '44
Frisch, Jane Esther—Mo.	Apr. 19, '44
Gouldman, Edwin F.—Va.	Oct. 26, '44
Henderson, Thomas B., Jr.—S. C.	Apr. 17, '44
Houston, Hubert S.—Ill.	Mar. 28, '44
Hufstедler, Joe G.—Tenn.	Dec. 9, '44
Lyon, William D.—Mich.	Feb. 4, '44
Marrs, Theodore C.—Tenn.	July 27, '44
Meriwether, Ellyson G.—Tenn.	Oct. 18, '44
Miller, Irvin S.—Va.	Oct. 31, '44
Mitchell, George J.—Miss.	Aug. 1, '44
Morrow, Charles W.—Ill.	Apr. 17, '44
Odom, Earl T.—Tenn.	July 26, '44
Owsley, Lawrence H.—Ga.	Apr. 7, '44
Pinkston, Evelyn J. L.—Tenn.	Aug. 26, '44
Schmitz-Dumont, Isabella M.—Pa.	Feb. 25, '44
Shipp, Larry G.—La.	Mar. 7, '44
Smith, James E.—Miss.	Feb. 25, '44
Spira, Victor—N. B. M. E.	Dec. 13, '44
Stewart, Vera B.—Tenn.	July 27, '44
Turbeville, Fred M.—Mo.	Nov. 20, '44
Weaver, Thomas H.—N. B. M. E.	June 6, '44
Williams, Henry W.—N. Y.	Mar. 3, '44
Wingo, Oliver B.—Miss.	Apr. 17, '44
Zieman, Stephan A.—Ill.	Apr. 17, '44

CHIROPODY RENEWAL LICENSES ISSUED DURING 1945

AuCoin, William J.	Mobile
Bauer, Marie H.	Birmingham
Benitez, George W.	Birmingham
Blotzer, Ellen L.	Mobile
Blotzer, John S.	Mobile
Carlisle, A. R.	Montgomery
Carter, Harry S.	Florence
Clark, George E.	Birmingham
Cooper, John M.	Birmingham
Crowley, Coy H.	Mobile
Crowley, Gentry B.	Huntsville
Daniels, John E.	Montgomery
Davis, Edith M.	Birmingham
Draper, William L.	Birmingham
Edwards, Charles M.	Birmingham
Leighty, Fred G.	Birmingham
Miller, John	Mobile
Oxford, Herman R. A.	Tuscaloosa

Pearson, Joe P.	Birmingham
Peterson, Bessie C.	Birmingham
Plevine, Erich H.	Birmingham
Plevine, Viola D.	Birmingham
Riccio, Peter D.	Bridgeport, Conn.
Rollings, Harry H.	Montgomery
Sealy, Ariel L.	Montgomery
Sealy, Elizabeth P.	Montgomery
Silverman, Isidor	Birmingham
White, Juddie B.	Birmingham
Wright, Thomas L.	Selma

FOR 1945

Certificates of qualification issued to physicians	84
(a) Physicians passing examinations June 26-28, '45	23
(1) Certificates issued	9
(2) Certificates to be issued after satisfactory internship	14
(b) Certificates issued after completion of internship Mar. 1, '45	8
(c) Certificates issued applicants completing internship Nov. 1, '45	3
(d) Physicians granted reciprocity	59
(e) Diplomates of the National Board of Medical Examiners	5
(f) Physicians' certificates of qualification revoked	6
(g) Chiroprody renewal licenses issued	29

CERTIFICATES ISSUED TO JUNE 1945 EXAMINATION APPLICANTS

Darden, Sampson H., Jr.	Nichols, Robert K.	Norton, Thomas P.
Feducia, Samuel J.	Prescott, John L.	
King, Don Edgar	Silberman, Salo J.	
Nabers, Hugh Comer	Solomons, Cyril D.	

CERTIFICATES TO BE ISSUED AFTER SATISFACTORY INTERNSHIP

Brannon, Wade H.	Littlejohn, James T.
Carlisle, Dyer, Jr.	Llewellyn, Raeburn C.
Carmichael, Herbert W.	McGehee, Edward H.
Cleveland, C. Hal Jr.	Scott, Edward V.
Cotten, Howard B.	Snoddy, Claude C.
Davis, James A., Jr.	Trice, Peter A., Jr.
Hood, Willis S.	Wakefield, John R.

CERTIFICATES ISSUED APPLICANTS COMPLETING INTERNSHIPS MARCH 1, 1945

Corbit, Jack	Marshall, Andrew S.
Griffin, Belton G.	Meadows, James K., Jr.
Hicks, James S.	Nix, Oscar G.
Humphries, Joseph M.	Tatum, Albert F., Jr.

CERTIFICATES ISSUED APPLICANTS COMPLETING INTERNSHIPS NOVEMBER 1, 1945

King, Robert T.	Randall, Fay M., Jr.
Malone, John M.	

PHYSICIANS WHOSE CERTIFICATES OF QUALIFICATION WERE REVOKED DURING 1945

Denny, Thomas H., Wadley (Randolph)	Mar. 6, '45
Elston, John H., Anniston (Calhoun)	Sept. 8, '45
Fields, Abijah C., Ensley (Jefferson)	Apr. 24, '45

Fussell, James A., New Brocton (Coffee)	Mar. 6, '45
Harmon, James S., Elmore (Elmore)	Nov. 28, '45
Johantgen, James F., Talladega (Talladega)	Aug. 6, '45

RECIPROCITY APPLICANTS RECEIVED DURING THE CALENDAR YEAR 1945

Ashhurst, Robert T., III—N. B. M. E.	Mar. 29, '45
Atkinson, William J., Jr.—N. B. M. E.	Oct. 5, '45
Baker, Roger D.—N. B. M. E.	Apr. 5, '45
Barrett, Maurice E.—Tex.	Nov. 28, '45
Bennett, Willard D.—Tenn.	Dec. 18, '45
Birdsong, Gordon G.—Tenn.	Nov. 8, '45
Bohorfoush, Joseph G.—Tenn.	Nov. 28, '45
Brewer, Alexander L.—Tenn.	Sept. 17, '45
Chapman, John R.—Ark.	Aug. 21, '45
Dodson, Marion H.—La.	Oct. 3, '45
Earl, Alfred Russell—N. Y.	Nov. 1, '45
Eppes, Nell—La.	June 6, '45
Foster, John E.—La.	Oct. 17, '45
Friedman, Louis L.—Ark.	Aug. 21, '45
Gartrell, Luther S., Jr.—Ark.	Aug. 27, '45
Gewin, Edwin E.—Tenn.	Mar. 15, '45
Gibbons, Harold M.—Cal.	Mar. 26, '45
Goodall, Robert G.—Tenn.	May 30, '45
Grosfeld, William J.—N. Y.	July 31, '45
Hamm, Pat—Ark.	Apr. 10, '45
Haynes, Walter G.—Ill.	Oct. 5, '45
Hermann, Robert C.—Texas	Nov. 6, '45
Hill, William E.—Ky.	Dec. 18, '45
Holley, Howard L.—S. C.	June 20, '45
Hollingsworth, Pryor L.—Ga.	Oct. 27, '45
Hudson, Perry B.—Ga.	Oct. 13, '45
Hunt, James Edgar—Ga.	Apr. 30, '45
Jenkins, Paul H.—Neb.	Sept. 17, '45
Jerome, Shepard—La.	May 3, '45
Kocour, Elmer J.—Ill.	Dec. 5, '45
Johnson, Bruce K.—Tenn.	Aug. 21, '45
Kracke, Roy R.—Ga.	Jan. 6, '45
Laslie, J. Cobb—Md.	Nov. 28, '45
Lidikay, Charles J.—Mo.	Nov. 28, '45
Little, Samuel C.—Ga.	Nov. 28, '45
Lowe, James Cecil—Tenn.	Jan. 8, '45
Malouf, George M.—Vt.	Apr. 18, '45
Mason, James M., III—Md.	Oct. 10, '45
McCarty, Cecil Jerome—Miss.	July 24, '45
McCord, Carey Pratt—Mich.	Mar. 6, '45
Meadows, Burton T.—N. B. M. E.	Mar. 24, '45
Minnich, William C.—Pa.	June 20, '45
Morgan, Marion M.—Ill.	Aug. 16, '45
Morris, Henry B.—Ga.	Oct. 22, '45
Muscat, Vincent P.—Mo.	Jan. 2, '45
Overton, Jesse W.—N. B. M. E.	Mar. 6, '45
Penton, John R., Jr.—S. C.	Oct. 5, '45
Phillips, Grady W.—Ga.	Oct. 22, '45
Pohl, William F.—Pa.	Mar. 21, '45
Saunders, Joseph H.—La.	Dec. 5, '45
Sawyer, Harold P.—N. Y.	Mar. 6, '45
Schwartz, Ferdinand F.—Ohio	Nov. 13, '45
Simmons, Shelton C., Jr.—Ga.	Nov. 15, '45
Smith, Ralph J.—Mo.	Aug. 31, '45
Steele, Frank E.—Tenn.	Nov. 2, '45
Stewart, James W.—Tenn.	Apr. 11, '45
Stewart, Robert C.—Tenn.	Oct. 3, '45
Tabershaw, Irving R.—N. Y.	Sept. 5, '45
Taggart, John K., Jr.—Va.	Sept. 14, '45
Tisdale, Raphael E.—Tenn.	Sept. 27, '45

Weathington, Warren T.—Tenn.	Dec. 5, '45
White, Henry Clay, Jr.—La.	Nov. 28, '45
Wishik, Julian L.—N. Y.	Nov. 28, '45
Zieman, John A.—La.	Nov. 28, '45

CHIROPODY RENEWAL LICENSES ISSUED FOR 1946

AuCoin, William J.	Mobile
Bauer, Marie H.	Birmingham
Benitez, George W.	Birmingham
Blotzer, Ellen L.	Mobile
Blotzer, John S.	Mobile
Carlisle, A. R.	Montgomery
Carter, Harry S.	Florence
Clark, George E.	Birmingham
Cooper, John M.	Birmingham
Crowley, Coy H.	Mobile
Crowley, Gentry B.	Huntsville
Daniels, John E.	Montgomery
Davis, Edith M.	Birmingham
Draper, William L.	Birmingham
Edwards, Charles M.	Birmingham
Leighty, Fred G.	Birmingham
Miller, John	Mobile
Oxford, Herman R. A.	Tuscaloosa
Pearson, Joe P.	Birmingham
Peterson, Bessie C.	Birmingham
Plevine, Erich H.	Birmingham
Plevine, Viola D.	Birmingham
Riccio, Peter D.	Bridgeport, Conn.
Rollings, Harry H.	Montgomery
Sealy, Ariel L.	Montgomery
Sealy, Elizabeth P.	Montgomery
Silverman, Isidor	Birmingham
White, Juddie B.	Birmingham
Wright, Thomas L.	Selma

Part II of the Board's report was adopted.

PART III

REPORT OF THE BOARD OF CENSORS AS A
STATE COMMITTEE OF PUBLIC HEALTH

B. F. Austin, M. D.
State Health Officer

ADMINISTRATION

PREFACE

During World War II family life in Alabama was necessarily modified to a marked degree. The stepped-up tempo of war work of all kinds, taking young men and women into the armed services, civilian defense program, shifting of population, temporary housing, difficulty in securing desired food and manufactured products changed conditions. At the same time our lives were changed in relationship to health and the care of sickness. Many physicians went into the service of their country; people who previously were unable to pay for needed medical and hospital care made greater demands for services for which they were then able to pay. Living expenses mounted with the increased income of all except salaried persons, among whom are health workers. It was only for the love of the work and service to humanity that most of the employees in the health departments who did not go into the service remained on the job at the home front. They continued to maintain a high standard of work.

The public health employees in Alabama did a magnificent job and did it well during the war years. We are particularly indebted to the physicians who served on a part-time basis in the midst of their busy practices. But since "V. J. Day" they find themselves overwhelmed with demands for service, even with many of those coming back from the service returning to work with the State and County Health Departments. They are awed because of the steadily increasing cost of living and inability to secure increased salaries to meet them. They are amazed at the incomes of their friends and acquaintances and receive flattering offers to engage in private practice of their profession, or go into industrial work. Our undying gratitude is extended to organized medicine, especially the State Board of Censors, for the unselfish devotion so ably demonstrated during these trying times. Leadership in public health was entrusted to the medical profession by the people through their Legislature seventy years ago and there has ever been an unwavering devotion of all civic-minded physicians to the trust so graciously granted by a grateful people.

In spite of the many and continuing handicaps to health much has been accomplished since the last meeting of the Association. Careful study of this report reveals not only the scope of activities carried on but also many of the far reaching results obtained. It will be observed that the fundamentals of public health have been constantly in effect. Our chief objective has been to keep well people well, so they can work and really live and be happy. We have continued to emphasize education, immunization and sanitation. The early diagnosis and treatment of the venereal diseases, tuberculosis and cancer have been constantly emphasized. Every effort possible has been made to control all infectious and communicable diseases. Physicians have been continuously urged to report all notifiable diseases to the health department promptly so we may institute proper procedures for the prevention of their spread.

The 1945 session of the State Legislature passed several acts dealing in an important manner with public health. Many additional responsibilities were assigned to the State Board of Health. Among these were: 1. Authorization to promote public hospitals, health centers and related facilities for the treatment of any type of disease; 2. Requiring persons connected with school systems to be examined for tuberculosis at least every three years; 3. Making the State Health Officer a member of the Board of Directors of the Alabama Boys' Industrial School; a member of the Board of Trustees, State Training School for Girls, member of Advisory Council, Construction of Hospitals; member of the State Building Commission, and member of the Commission on Education with Respect to Alcoholism; 4. Increasing the appropriations for cancer control, other salaries and expenses, and subsidy to counties for typhus control.

On June 16, 1945 the Governor approved Act No. 115 authorizing the Commission on Education with Respect to Alcoholism. This Com-

mission is vested with the power to prepare and administer a program for the rehabilitation of alcoholics and the education of the public with respect to dealing with alcoholism as a disease. The Commission is composed of the following persons: the Superintendent of the Alabama State Hospitals; the Director of the Department of Public Welfare; the Professor of Psychiatry at the Medical College of Alabama; the Director of the Division of Vocational Education in the State Department of Education and two citizens named by the Governor.

The Commission has met, organized itself as prescribed in the Act, and outlined a tentative program to "distribute literature in the libraries throughout the State, arrange for speakers, who are informed, to appear before civic organizations, use the newspapers and the radio for publicity and interviews, and to have outdoor advertising signboards placed in conspicuous localities in Birmingham, Montgomery and Mobile stressing three concepts: 1. Alcoholism is a disease and the alcoholic a sick person. 2. The alcoholic can be helped and is worth helping. 3. Alcoholism is a public health problem and therefore a public responsibility."

On December 31, 1945 the Rabies Research Laboratory operated in Montgomery for several years with funds from the Rockefeller Foundation, in cooperation with the State Health Department, was closed. The director of the laboratory expressed his personal appreciation for the wholehearted cooperation given by the personnel of the State Health Department and the following quotation is taken from a letter received from Dr. Hugh Smith, Assistant Director of the Rockefeller Foundation:

"It is a pleasure to inform you that the Board of Scientific Directors of the International Health Division at their meeting on March 22nd approved the donation of the equipment used in the Alabama Rabies Laboratory to the Alabama State Board of Health. It is hoped that this equipment will be of value to you in extending the services of the State Public Health Laboratories.

"We greatly appreciate the consideration shown by you and your associates to the staff members of the International Health Division who participated in the activities of the Rabies Laboratory. It seems clear that the studies completed at the Laboratory are of real value in the formulation of intelligent rabies control programs, and we are grateful to your department for the collaboration which made this project possible."

Following the closing of the Rabies Research Laboratory overtures were made to the State Health Officer by representatives of the U. S. Public Health Service for that federal agency to have the use of the facilities to conduct other research. The laboratory, therefore, has been reopened for studies in poliomyelitis, encephalitis and other virus diseases, as well as serologic work in typhus fever and Rocky Mountain spotted fever.

Two federal agencies, the U. S. Public Health Service and the Children's Bureau, have been

particularly helpful during the war years and their staffs recognize the fact that, during the post-war period, problems comparable in scope and extent with those during the war may be expected to arise. These two federal agencies have contributed much, financially, to Alabama's health program. Our depleted staffs were strengthened materially by federal personnel at a time when recruitment for state and local departments was at a very low ebb. These federal workers became local workers when assigned to duty in Alabama and carried on their services under the auspices of state and local health authorities. Our gratitude is expressed in this report for the magnificent way in which these agencies have cooperated and the splendid contributions they have made to Alabama's health program at a time when we faced enormous handicaps to community health.

It is gratifying to report that Alabama has been spared a devastating epidemic of any sort whatsoever during the stressful times through which we have gone and still experience. Meningitis has ever threatened but the success of sulfa therapy has reduced greatly the high fatality rate of this disease. Typhoid fever and other filth-borne infections have been extremely low and although smallpox cases have occurred there has been no death due to this disease.

The infant and maternal mortality rates have improved but they are yet too high when compared with those of the nation. Efforts have been crowned with success, so far, in the prevention of the dangerous spread of malaria and other tropical diseases which might have been caused by infected troops returning from overseas. In fact, as a result of our control measures malaria continues to decline. Gratifying results have been accomplished in holding the gains previously made against syphilis in the civilian population. In those counties where the blood survey for syphilis has been made we have observed distinct advances in the control of this disease.

Mortality from tuberculosis has been steadily declining even though there is a pitiable small number of hospital beds available for the treatment of persons affected with this disease. Industrial hygiene services were continued and slightly expanded during the two-year period. The increase in state appropriations for cancer control has enabled the health department to render aid to a greater number of persons through its six cancer clinics. This service, however, has not caused any reduction in the number of deaths due to cancer. Nevertheless, the activities of the health departments, linked with the ever-increasing educational work of the Field Army of the American Cancer Society and the intelligent cooperation of the medical profession, will ultimately bring satisfactory results.

The beneficial results accomplished as summarized in this report were brought about by a combination of incidents and cannot be attributed to any one cause. It is believed that the continued interest, cooperation and support of the medical profession laboring under great dif-

facilities, perhaps had more to do with the accomplishments than any other one thing. The intelligent cooperation of our state and local legislative and appropriating bodies had a far reaching effect, for without these many of the services would not have been possible.

In addition to these two important contributing factors there has been a more comprehensive cooperation on the part of a better informed public in matters pertaining to personal and public health. This opportunity is therefore taken to express profound gratitude to all who have contributed of time, talent and finances to promote the health of the people of Alabama. The paid public health workers who have given unselfishly and unstintingly of their time and talents to the attainment of the degree of success experienced in improved health in Alabama are gratefully remembered in this report. May their zeal inspire others to the end that Alabama will continue to make sane progress in health along sound lines.

HEALTH EDUCATION

As in the past, this division sought, during the two-year period covered by this report, to increase the health knowledge of the people of Alabama, reaching them with this knowledge not primarily as individuals or as members of small groups but in the mass, in order that the information it was seeking to disseminate might be of service to the largest possible number of people the largest possible number of times. To that end, the division's major emphasis continued to be upon the three media which have been used so successfully by other agencies, enterprises and individuals—the radio, the press and the motion picture.

Five hundred and eighty-one releases were issued by this division in 1944 to the two Montgomery dailies and the principal news services, which serve practically every daily paper in the State; and 592 in 1945, bringing the two-year total to 1,173. A special weekly release was also issued regularly to the weekly papers and the dailies outside Montgomery. While an effort was made to give all of these releases, both daily and weekly, as much news value as possible, their purpose was primarily health education. The weekly feature article *State Health Chats* was also prepared regularly and made available to the A.P. newspapers in all parts of the State.

Notwithstanding the drastic curtailment of newsprint due to the war and the tremendous amount of newspaper space devoted to the global conflict, the material prepared by this division continued to be widely used. The division's 1944 and 1945 scrapbooks contain 1151 clippings of its releases which are published in the two Montgomery dailies. No clipping of out-of-town papers is done.

The weekly radio talks in the "Health is Wealth" series were heard over Station WSFA (Montgomery) throughout 1944 except for a short time before Christmas, when the unprecedented demand by commercial firms for radio time to advertise Christmas merchandise reduced

almost to the vanishing point the time available for public service features, which are operated on a sustaining, or free, basis. There was no such suspension of these broadcasts in 1945, and they were heard every week throughout the year except for one week in which technical difficulties interrupted the broadcasting schedule and caused the State Health Department talk for that week to be omitted.

In the radio talks, as in the newspaper articles and other public health education material prepared by this division, an effort was made to provide the people of Alabama with worthwhile health information. The station's day-time range covers 25 counties containing radio receiving sets available to approximately half a million persons. How large a proportion of those half million actually tuned in to these broadcasts is of course a matter of conjecture, but indications are that a considerable number did so.

As in the past, these radio talks were mimeographed after delivery for distribution as health education material. Some were printed in newspapers and magazines, thus reaching a large public over and above that reached by the airwaves and mimeographed machine.

A number of articles originating in this division, including book reviews, were published during the year in *The Journal of the Medical Association of the State of Alabama*, while other articles and reports, including the 1943-44 and 1944-45 fiscal year reports, were prepared for the U. S. Public Health Service, the State Health Officer, and other officials, publications and agencies. The director assisted in the preparation of a new and now revised edition of *The Health of Your State* and edited the 1943 annual (calendar year) report, which, however, was prevented by war conditions from being published. War conditions likewise delayed preparations for publishing the 1944 report. However, it is planned to publish both as soon as possible after a return to normal, or approximately normal, conditions in the postwar era.

A 36-page illustrated booklet, *Public Health Is Many Things*, depicting the activities of the State Department of Health and county health departments and describing the State's most formidable public health problems, was prepared by this division for distribution in this and other states. Copies were received from the printers in November 1944, and distribution has been restricted, to conserve the supply.

The State Health Department's bi-weekly mimeographed newspaper, *The Public Health News Bulletin*, which was launched in the fall of 1943, continued to serve as a link between Alabama's public health agencies and the State's public health workers serving their country on battle fields, naval vessels and training centers in all parts of the world. It also attempted to keep public health workers still at their accustomed tasks on the home front in touch with each other and with the public health agencies.

The facilities and services of the Film Library were offered to all county health departments of the State in 1945. However, some have not been able to avail themselves of the offer because of

inability to obtain the requisite projection machines and for other reasons. Four hundred and thirty-two film bookings were received in 1944 and 440 in 1945, bringing the two-year total to 872.

MACHINE TABULATION

The Division of Machine Tabulation continued to act in the capacity of a service division, processing work for the various bureaus and divisions of the State Health Department.

Work Processed for the Bureau of Preventable Diseases: With the stepping up of the work on the blood testing program, the work here has grown rapidly. This was especially true in the case of the Jefferson County blood testing program. It was found necessary to establish an auxiliary office located at the Fair Ground in Birmingham to process these records locally. This office force consisted of approximately 125 employees for a period of about two months. Additional tabulating equipment was also brought in for this program.

In order to cope with the changing treatment program in the clinic it was found advisable to revise the reporting of the clinic activities and the reports released from this office. The treatment progress card which has been used since 1940 was discarded in favor of a Report of Clinic Activities. The Monthly Clinic Population and Activity Reports have been replaced by a combined activity and treatment report.

A Central Registry of Venereal Disease Contacts was operated for the Division of Venereal Disease Control. Reports on contacts named and the disposition made by the counties of these contacts were prepared monthly, together with various annual and semi-annual reports.

Other work done for the Bureau of Preventable Diseases included the preparation of the annual statistical tables on communicable disease morbidity and the Monthly Venereal Disease Morbidity Report for the U. S. Public Health Service. An analysis of the expenditures on the cancer control program was also prepared.

At the request of the Director of the Division of Tuberculosis Control a reporting system was designed which has been adopted. This has not as yet been put in operation due to change in personnel. It will probably be put in operation in the near future.

Work Done for the Bureau of Vital Statistics:

Data contained on birth, death, marriage, divorce and stillbirth certificates were transcribed to punch cards. From these cards statistical reports and indexes were prepared. An index was also prepared on certified copy requests.

Work Done for the Bureau of Maternal and Child Health: A quarterly report to the Children's Bureau on the Emergency Maternal and Infant Care Program was prepared. Special studies were made for the Division of Dental Hygiene.

Work Done for the Bureau of County Health Work: A summary of the monthly report received from each county was prepared quarterly for the U. S. Public Health Service.

Work Done for the Finance Division: A record of fees paid private physicians was kept and a statement prepared at the end of the year showing the amount paid each doctor.

COUNTY HEALTH WORK

The ideal of service that has always motivated the lives of the physicians of Alabama in their relationships with the State's public health forces vouchsafed to the people of the Commonwealth protection from disease during the most trying period of the State Department of Health's 66-year history; and these same self-sacrificing servants continue to stand by, prepared to remain at their posts until the emergency has passed. Though the war is over, the duration has not ended—and the shortage of manpower with the close of the fiscal year was as acute as at any time during the progress of hostilities. As a consequence, not only did combinations of counties continue to operate under a common directing head but in several instances the aid of practicing physicians was enlisted in providing oversight for County Health Departments. It is to this latter group that great credit is due for its contribution to the people's welfare. At a time when there were already increased demands on all physicians because of the military service of many of their confreres, they assumed additional responsibilities in the field of public health with little hope of reward. Perhaps it is affrontery even to suggest that they expected anything in return since they were but upholding one of the finest traditions of medicine, that of striving to keep people well. Nevertheless, those they served and are serving owe them a debt of gratitude they can hardly pay.

With this foreword it may be said that, during the period covered by this report, all of the State's 67 counties were served by local departments of health operating under the jurisdiction of the State Department of Health, as provided by law—such state-wide organization at the local level having been in effect since January 1, 1938 when Bibb, the sixty-seventh and last county, provided itself with full-time health service.

For the reader who may not be familiar with the public health movement in Alabama, it may be well to recall that the attainment of local protection from preventable disease by all the counties of the State marked the complete fulfillment of the plan made known in 1872 by the founder of the movement, Dr. Jerome Cochran, later Alabama's first State Health Officer, who, in promoting the organization of a State Board of Health and a Board of Health for each of the counties, said: "Whenever, in the judgment of the county or municipal authorities, circumstances should justify some direct practical attempts towards an improved sanitary condition, the machinery would be ready, and could be put into working order at once." Forty-two years elapsed between this utterance and the birth, in 1914, of Alabama's first full-time County Health Department (Walker County), and twenty-four between Walker and Bibb, but the machinery was ready and in working order.

During the year 28 counties were served by individual health officers, 26 shared thirteen, 10 received oversight from practicing physicians, and, on September 30, three counties were unprovided for.

What of the future? As a nucleus, in rebuilding, it is hoped that the larger part of the number of medical health officers lost by Alabama to the Army and Navy will return to assume their former places or to accept positions of greater responsibility. There may be others, also, who, on returning from service, will want to engage in public health work as a career. It is doubted that the Medical College of Alabama will soon be able to meet the needs in the field of practice as well as that of prevention but it, too, should, in time, provide material. Though combinations of counties may persist, there will not be decreased demand for medical health officers inasmuch as it is contemplated there will be assistants to those primarily responsible for the operation of district set-ups.

In order that there may be efficient and economical service, as measured by the Subcommittee on Local Health Units of the Committee on Administrative Practice of the American Public Health Association, 36 units of local health jurisdiction are suggested for Alabama. Topography, land area and other factors considered, it hardly seems practical to hope for fewer groupings than 43. Assurance is given, however, that the mind of Alabama is not static; and that, as always, it will plan as seems best for the people of the State.

PUBLIC HEALTH NURSING

Recruitment of nurse personnel for County Health Departments, field introduction, staff education, and supervision constitute a large part of the duties of the members of the State Health Department's Division of Public Health Nursing. The satisfactory performance of these functions is dependent to a large extent upon the available supply of nurses in Alabama, both as to number and quality. The present supply, both as to quantity and quality, is quite inadequate and this situation existed to a large extent prior to the war years. There have been times when it has not been possible to make any selection at all. This is not intended as a reflection on our county nurses. They have and are rendering a very creditable service, oftentimes under great difficulties. Military service drew 46 of our public health nurses from county service and so far only 6 have returned. The nurses released for military service were the young, better prepared group, on the whole. On January 1st five counties were without the service of a public health nurse. This, of itself presents a gloomy picture and the outlook for future recruitment is not bright. Nurses for public health are recruited largely from graduates of Alabama schools. There was increased enrollment during the war years due mainly to the recruitment activities of the Nursing Division of the U. S. Public Health Service. The federal stipend, as well as the glamour of nursing during war time, undoubtedly provided the incentive in many cases. Now that both of these inducements are lacking it is

essential that all interested persons be aware of the situation and what it portends for public health now and in the future. The Alabama State Nurses' Association, and hospitals operating nursing schools, have employed a recruitment officer. This is a step in the right direction, but will not of itself meet the need. A pattern for nursing education similar to that getting underway for medical education would be educationally and economically sound. A recruitment officer might logically hope for success when such an offering is available.

The Subcommittee on Local Health Units of the Committee on Administrative Practice of the American Public Health Association recommends 36 units of local health jurisdiction for Alabama. Combining counties for administrative purposes makes it all the more imperative that public health nurse personnel be well prepared. A minimum of one public health nurse per five thousand population served is recommended by this same committee. For Alabama this would mean 578 nurses or 401 additional nurses since we now have a total of 177 nurses.

The count of nurses for the years 1944-1945 is as follows:

December	1944	1945
State Health Department....	10	9
County Health Departments	195	168
Total	205	177

MERIT SYSTEM UNIT FOR COUNTY HEALTH WORK

Examinations were administered in November 1944 and April 1945 in the following series: Clerk I and II, Typist I and II, Nurse in Public Health, and Sanitation Officer II and III. As of September 30, twenty-five (25) persons remained on provisional appointment. Examinations have now been given in all series except Public Health Nurse, War Emergency (which appointments are for the duration of the emergency due to the war only, and of whom no more than statutory, physical and personal qualifications are required); Clinic Nurse, Public Health Engineer and Scientific Aide—which classifications have been established since the last examination series was offered. Examinations in all series (except Public Health Nurse, War Emergency) are in preparation for administration this fall.

New pay scales for all classifications, and specifications in three new classifications, have been prepared and approved by the State Department of Health, the Merit System Council and the U. S. Public Health Service. At present, specifications covering qualifications, and the pay scale for county health service, are higher in Alabama than for any of the 14 states of this region except Texas and Florida.

A complete employment record for all persons in county health service has been filed by the Merit System Unit; the guidance and efficiency record form revised; a handbook for each employee has been distributed; and the close of two years of activity shows a fine degree of understanding and cooperation on the part of all those

concerned. For this reason, the Merit System Unit, the first to extend personnel administration on a merit basis to all county positions, faces with confidence reconversion to peace-time employment functions.

There has been an employee turnover in the period September 1944-September 1945 of 32 per cent. To fill the 428 positions occupied during that year 565 persons were under employment. If all who are on military leave return to resume their work, the following will be required to fill present needs: 23 physicians, 14 dentists (10 white, 4 colored), 2 meat and milk inspectors, 4 public health engineers, 46 public health nurses (and 41 replacements for war emergency nurses) and 10 typists.

BUREAU OF LABORATORIES

The years 1944 and 1945 covered the most difficult period the Bureau of Laboratories has experienced in its entire history. The problem of keeping trained laboratory personnel grew more serious as the war progressed. With the loss of some personnel to the armed forces and the additional losses to civilian positions within the armed forces, the point was reached where the procurement of experienced personnel was extremely difficult, if not impossible.

As a result of this shortage of laboratory personnel it became necessary to close temporarily, in 1945, three of the Branch Laboratories. The Tuscaloosa Branch was closed March 31; the Selma Branch October 13, and the Dothan Branch on October 31. The Anniston Branch that was destroyed by fire on October 18, 1942 had not been reopened at the end of 1945.

DIAGNOSTIC DIVISION

The total number of specimens examined during each of the years 1944 and 1945 was the lowest since 1939. This was doubtless due to two factors: the closing of the Branch Laboratories and the general curtailment of public health activities necessitated by the exigencies of war. With the return of workers to the public health field the general upward trend of the specimen load is expected to be resumed.

Table I

A Summary of the Number of Specimens of the Different Types Examined During 1944 and 1945

Kind of Examination	1944	1945
Diphtheria	6,645	5,940
Vincent's infection	1,914	1,746
Pneumococcus typing	28	
Enteric organisms	8,133	10,150
Agglutination tests	8,370	9,255
Malaria	10,968	9,578
Intestinal parasites	21,370	20,607
Tests for syphilis	437,332	401,957
Gonorrhea	39,048	38,925
Tuberculosis	18,449	18,402
Rabies	737	1,388
Water samples	14,656	14,303
Milk and dairy products	25,980	23,515
Meningococcus	57	39
Miscellaneous	8,634	8,056
Total specimens	602,321	563,861

Table I gives a summary of the specimens examined by the Bureau of Laboratories during the years 1944 and 1945. A study of Table I reveals that the specimens for venereal disease constituted a major portion of the laboratory work for these two years. Of the 437,332 tests for syphilis done in 1944, 21,611 were survey blood specimens collected in the state-wide serologic survey being carried out under the Henderson Act. Of the 401,957 tests done in 1945, 29,457 were survey blood specimens.

Progress has been made during the two years in confirming by culture the cases of suspected Brucellosis showing titers of 1:80 or higher in agglutination tests. The number of specimens cultured has increased each year as has also the number of isolations.

In the annual report for 1943 it was pointed out that the demand for pneumococcus typing had been so little as to raise the question of the continuance of this service. In 1944 this decline continued and it was decided that the procedure should be abandoned. In accord with this decision, an announcement to this effect was made in the State Medical Journal.

Table II

Biologic Products Prepared and Distributed	1944	1945
Rabies vaccine (treatments)	1,398	1,897
Diphtheria toxoid (alum)	117,460 ml.	115,090 ml.
Diphtheria toxoid (plain)	1,790 ml.	1,440 ml.
Typhoid vaccine	274,710 ml.	292,350 ml.
Schick test toxin	1,178 ml.	1,512 ml.
Sterile physiologic saline	48,630 ml.	1,675 ml.
Mercury benzoate solution	10,820 ml.	5,160 ml.
Sterile distilled water	7,421,300 ml.	5,764,750 ml.
Silver nitrate solution (ampules)	59,340	53,144

In comparison with 1943 a noteworthy feature was an increased demand for rabies treatments in both 1944 and 1945. The demand for typhoid vaccine showed a decided decline. This was no doubt due to curtailed activities of County Health Departments.

SPECIAL ACTIVITIES AND COMMENTS

Syphilis: 1. State-Wide Serologic Survey. Under the Henderson Act, passed in the 1943 session of the Legislature, all civilians between the ages of 14 and 50, residing or living in the State of Alabama, are required to have their blood examined for evidence of syphilitic infection. The prosecution of the program was organized on a county-by-county basis and the first county tested was Wilcox, in which the specimens were taken in 1943. By the summer of 1945 the acute shortage of laboratory personnel was seriously interfering with the progress of the program and the U. S. Public Health Service was requested to lend assistance to the State Health Department by furnishing laboratory personnel to do

the testing. In response to this call Dr. J. F. Mahoney and a group of laboratory workers were assigned to do the laboratory work for the Jefferson County survey. Of the more than 300,000 specimens tested in Jefferson County all were done by Dr. Mahoney's team and are not included in the laboratory report for the year.

2. Selective Service Examinations. As compared to 1943, during which 191,182 bloods were tested, the Selective Service examinations dropped to 9,490 in 1944 and to 83 in 1945. Had it not been for the coincidental decrease in these examinations it is obvious that the survey mandated by the Henderson Act could not have been undertaken.

Typhus: Preliminary Study of Complement Fixation. During 1944 a preliminary study was made of the complement fixation test as applied to the diagnosis of typhus. This study was continued in 1945 and some 900 sera from bloods collected in the course of a routine serologic survey for syphilis, and representing a random sample of the population, were examined.

Milk: After much preliminary study, the Everson test was adopted as a means of detecting reconstituted milk. Work was also done on the coliform test as a means of detecting faulty pasteurization or contamination subsequent to pasteurization.

Diphtheria: A large amount of work has been done in connection with the development of a better culture medium than the classical Loeffler's blood serum. Considerable progress has been made and the investigation is being continued.

Enteric Culture: Investigation and Evaluation of Enteric Culture Procedures. After much preliminary study, a revision of the enteric culture procedure has been made and will be introduced into the Branch Laboratories at an early date.

PREVENTABLE DISEASES

EPIDEMIOLOGY

The two years that have elapsed since the last meeting of the Association have been eventful ones, covering as they did the summation of our war effort and the return to peace-time reconversion problems. The increasing scarcity of medical personnel, evident in all parts of the State, was particularly marked in public health work so that less immunization and other activities directed towards the control of communicable diseases were carried out by health departments. The full extent of any lapses will not become evident until later but the long series of declines in some of the diseases came to an end. Typhoid fever, for example, increased from 119 cases in 1943 to 211 in 1944 and 144 cases in 1945, while diphtheria increased from 548 cases in 1943 to 697 cases in 1945. These increases are not too serious but they do emphasize the need of an accelerated program now to reverse the rising trend.

Poliomyelitis, while non-epidemic, was at a higher level than any normal year with 103 cases in 1944 and 153 cases in 1945. Meningitis, a war-time visitor, remained at a high level of incidence but may be expected to diminish with the aban-

donment of many military posts. The State was fortunate in escaping a major epidemic of influenza, although the disease was quite prevalent in a mild form both in 1944 and the end of 1945.

CANCER CONTROL

The cancer control program was inaugurated in October of 1943 when the first State appropriation became available. This program was designed to furnish diagnosis and treatment for those residents of the State who were unable to pay for such services in private practice. A total of six cancer clinics were established, each with a definite meeting time, and to these have been referred an increasing number of patients.

During the first year (through September 1944), 283 patients were seen by the clinics, of whom 264 were found to have a malignancy and were treated. The second year of operation showed a continuing growth and a total of 500 new cases were admitted. Treatment in many is a long drawn out procedure, and some of the patients first admitted are still returning for further treatment. It is impossible, therefore, to give any final report on what has been done for these patients. It is interesting to note that fifty per cent of the cases admitted have been cancer of the female generative organs or breast. Twenty-five per cent have been skin cancers and the balance has embraced examples of most types of cancer. Considering, therefore, the patients admitted during the first year of operation but continuing treatment on into the second year, the clinic load was at least one hundred per cent greater during the second year.

Patients have been admitted from every county in the State, indicating a widespread need for the service. At the present time follow-up is being instituted to determine the outcome of patients treated and the disposition of patients approved for admission but failing to meet their appointments. Referral of cases has, in many instances, been entirely too late, as far advanced, hopeless cases have come in only to be sent back home as untreatable. Most of the responsibility rests on the patient inasmuch as he has delayed visiting a doctor until beyond treatment. The Field Army of the American Cancer Society is doing an excellent job in the education of the public but to complete the program the medical profession must raise its "index of suspicion" so that early lesions may be found at a stage that is amenable to treatment.

The Legislature has been generous in increasing the appropriations for this work and the results so far are encouraging that some inroad can be made in the steadily increasing mortality rates from cancer.

VENEREAL DISEASE CONTROL

Reflecting the national trend in 1944, Alabama venereal disease rates continued a downward swing with only 15,269 new cases of syphilis, and 6,370 new cases of gonorrhea reported. A great upward surge in the reported new cases of syphilis and gonorrhea occurred in 1945 when 32,507 cases of syphilis and 13,967 cases of gonorrhea were reported. The case-finding potentials of the mass

blood testing program were responsible, to a great degree, for this marked increase.

To physicians, clinics and hospitals throughout the State went free drugs for the treatment of syphilis. To clinics only went free drugs for the therapy of the other venereal diseases. In the two years there were distributed 1,841,662 doses of anti-syphilitic drugs and 1,037,136 tablets for the treatment of gonorrhea.

As a result of intensive therapeutic methods with penicillin, and the more rapid turnover in the new cases of venereal diseases, some clinics were discontinued during the two years. By December 31, 1945, there were 167 clinics in operation, and an average of 13,942 patients were treated each month during this two-year period. In July, 1944, a Rapid Treatment Center, operated by the U. S. Public Health Service, was opened in Birmingham and up to December 31, 1945, 10,257 patients with venereal disease were given treatment. Infectious syphilis was treated in nine days and gonorrhea in twenty-four hours.

The blood test law, requiring individuals between the ages of 14-50 to be blood tested for syphilis, was brought into operation in nine counties: Sumter, Lee, Macon, Russell, Houston, Dale, Morgan, Jefferson and Calhoun. But the survey in Jefferson County in May and June of 1945 was a demonstration to show that in a large population group mass blood testing could be done and follow-up and treatment could be accomplished at the same time. In cooperation with the U. S. Public Health Service, the largest serologic laboratory in the world was set up and geared to examine more than 10,000 blood samples a day. An auxiliary Rapid Treatment Center was established to supplement by 500 beds the existing facilities. It required 826 people 42 days to blood test 271,775 individuals and find 32,655 infectious persons and bring 3,231 infectious cases of syphilis under treatment. The Jefferson County mass blood test survey was the largest of its kind ever attempted in any population. The results in the nine counties were:

County	No. of People Blood Tested	White Percent Positive	Colored Percent Positive	Total Percent Positive
Sumter	10,151	3.6	24.96	20.8
Lee	17,014	1.8	19.4	11.2
Macon	12,685	0.92	10.72	9.2
Russell	17,541	3.6	21.7	13.5
Houston	21,681	2.96	25.55	9.91
Dale	9,945	2.2	21.3	6.5
Morgan	24,054	2.41	27.25	6.18
Jefferson	271,775	3.07	30.86	14.16
Calhoun	38,056	Other figures not available		

Since the personnel for the follow-up and investigative work was further reduced due to war, education was used for frontal attacks on the venereal diseases. The one month educational program preceding the blood survey gave to the people of the county surveyed the facts about syphilis. Motion pictures, signs, posters, newspaper articles, radio talks and speeches presented the facts about the venereal diseases in a variety of ways. Twelve-page newspaper inserts were

distributed as a supplement in 98 newspapers. Beginning September 1944, a health education bulletin was distributed to all health and educational workers. This was an aftermath of two sex education conferences.

INDUSTRIAL HYGIENE

The year 1944, in spite of handicaps, was one of active accomplishment for the Division of Industrial Hygiene. Undaunted by a fire on its premises and the loss of the Director, the Division carried on and made distinct advances in furthering the industrial hygiene program in the State.

Sixty-eight plants in the State were visited, and medical, nursing, engineering, laboratory, nutritional and dental services were rendered. Medical activities included the promotion of better medical care in industry, appraisal of existing medical care programs, investigation of industrial disease outbreaks, and mass x-ray surveys for tuberculosis. A total of 136 physical examinations were done, as well as 74 patch tests and over 53,000 35 mm. photofluorographic films. The mass x-ray surveys were carried out in 17 different industrial establishments.

Nursing activities were handicapped by the absence of an industrial hygiene consultant nurse. Nevertheless, two industrial nurse associations, recently organized, were aided in their activities. Visits of nurses into homes of absentee workers of the Tennessee Valley Authority were continued in cooperation with the Lauderdale and Colbert County Health Departments and the nursing staff of the Tennessee Valley Authority.

Engineering activities included a study of environmental conditions for dust, chemical and physical hazards. During the year a total of 558 laboratory determinations were made. These determinations included 15 dust counts, 56 physical measurements, 437 biologic studies, and 59 chemical qualitative and quantitative analyses. Laboratory findings were correlated with the general engineering investigations and practical recommendations were made to the industries concerned.

In conjunction with the U. S. Public Health Service, Division of Industrial Hygiene, appraisals of existing industrial dental programs and the initial promotion of dental health programs in industry were carried out in eight plants. In cooperation with the War Foods Administration, nutrition surveys were carried out in 11 plants.

Plant studies were made in active cooperation with various local civic organizations; state organizations such as the Alabama Industrial Relations Board and the Associated Industries of Alabama; and various federal agencies such as the U. S. Army, U. S. Navy, U. S. Maritime Commission, U. S. Department of Labor, U. S. Department of Agriculture, and the Tennessee Valley Authority.

Industrial hygiene was promoted by 20 addresses given to various groups on the general and technical aspects of industrial hygiene. Lectures were delivered to the students of the University of Alabama, School of Medicine and School of Engineering.

The work of the Division of Industrial Hygiene during the calendar year 1945 was concerned chiefly with the problem of silicosis. There are a number of other industrial hygiene hazards in the State which merit serious study but it was decided to concentrate on silicosis since our previous experience demonstrated that, if silicosis was amply investigated and control measures instituted, prevention of other occupational diseases would be more easily effected.

In 1942 the Division did an exhaustive study of the hazard from silica dust in the mines and plants of the Tennessee Coal, Iron and Railroad Company. At the company's request a repeat survey in the mines was made in the early part of this year to study the effect of control measures introduced in the interval. Control measures have not as yet been instituted in other mines in the community. A study was made in the Woodward Iron Company, but the Republic Steel Corporation and Sloss Sheffield Steel and Iron Company preferred to wait until they had introduced control measures before requesting a survey. Delay in studying these mines was also influenced by the end of the war and the uncertainty of management and labor conditions in this period.

An educational campaign on the hazard of silicosis was vigorously carried out. Groups addressed on this problem were the Alabama Society of Safety Engineers, Personnel Managers Association, the Medical and Interne Staffs of the Hillman-Jefferson Hospitals, students of the Medical College of Alabama, the several locals of the International Mill, Mine and Smelter Workers, C. I. O., and other interested organizations.

A study of miners suffering from the disease was initiated at the George Eaves Anti-Tuberculosis Clinic and a clinic day (each Thursday) was established in which cases of silicosis, silico-tuberculosis, and diagnostic problems are referred by the other physicians. A pneumoconiosis registry was started and over 200 cases have been recorded so far. A survey, under union auspices, was made at one of the locals (Ishkooda) and a significant number of cases was found. Various clinical and physiologic studies on silicotics were started at the George Eaves Clinic.

An experimental program was started with Dr. J. D. Bush at the Medical College of Alabama. Animals and materials for study were provided by the State Department of Health, Division of Industrial Hygiene, and study of pathologic sections are being made by Dr. Bush for the effect of dolomite, silica, hematite and hematite-silica fractions.

During the year a trip was made to various centers to determine the efficacy of aluminum therapy and prophylaxis. An exhaustive report was written on this trip and distributed to many plants in the community. Programs for the introduction of aluminum as a prophylactic and therapeutic agent are still tentative and have been delayed chiefly due to labor unrest.

An attempt has been made to enrich the library with data on silica and silicosis as well as on other industrial hygiene subjects.

A study of silica dust produced in monument shops due to etching of granite was initiated and several engineering studies were made in the Birmingham area.

Other industries were not neglected and requests for service were answered. During the war a number of industries now closed were visited frequently—chiefly Bechtel McCone Corporation and Rheem Manufacturing Company. Several visits to shipyards were made and a periodic study of workers exposed to lead from spray painting at the Ingalls Iron Works was carried out. Shipbuilding went through various phases during the war and toward the end of the year stabilized its labor force. At this time the hazards from repair and salvage of ships and the building of new ships without control by the Maritime Commission are becoming one of the chief industrial hygiene problems in the State.

A survey was made of a large number of textile mills for environmental conditions. This work was not entirely completed as there are still many textile mills in the State to be visited. A program was initiated with the Director of the Division of Tuberculosis Control regarding the incidence and manifestations of byssinosis.

A number of miscellaneous industries were studied and toward the end of the year interest was stimulated in the foundries regarding hazards from silica, lead, and other toxic materials.

During the venereal disease control campaign in Birmingham the Division cooperated in establishing a program for control and treatment in a major foundry in this area. This program is still going on.

Close touch was kept on the incidence of typhus fever as an occupational disease in restaurant workers during the year, since Alabama had many cases of Weil's disease in miners. The occurrence of a case in a restaurant worker stimulated a special study on the incidence of leptospirosis in rats trapped in the Birmingham area.

New and more adequate quarters for the office and laboratory were established at the Jefferson County Health Department.

TUBERCULOSIS CONTROL

This resume' of the activities of the Division of Tuberculosis Control for 1944 has been prepared by one who was not with the Department of Health at that time. Consequently, the report is made without detailed information as to the many problems which arose during that period of time.

The statistics for 1944 once again show a stepwise decline in our total mortality rates for tuberculosis. Last year, 1943, we had 1,309 deaths with a tuberculosis mortality rate of 45.2 per 100,000. This year we had 1,270 deaths with a mortality rate of 42.8 per 100,000. In comparing our tuberculosis mortality rates by race this year, 27.1 for white persons and 72.8 for colored persons with those of last year 27.4 and 79.0 respectively, both races are found to have a decrease which is more striking among colored persons.

This Division continued to provide counties with x-ray clinics as in the past. However, limitations in the amount of film available to us

were responsible for a sharp reduction in the number of persons examined this year. This reduction amounts to approximately 25 per cent as compared to the figures for 1943. Among 10,499 persons examined in 1944, 713 new cases of tuberculosis were found. Once again the majority of cases diagnosed at these clinics were advanced, indicating that if we are to find early treatable cases of tuberculosis in the future we must revise in some way the activities of these clinics.

As in past years, the films of Selective Service rejectees with abnormal pulmonary findings have been referred to this Division for consideration and these recommendations in turn have been forwarded to the various county health departments for further investigation.

The Division has continued to interpret and advise private physicians on chest x-ray films made on their own patients. This practice has benefited the private physician and the patients, and has improved the liaison between the health departments and private physicians.

The photo-fluorographic unit of the Jefferson County Health Department and Alabama Tuberculosis Association has continued to do mass radiography, thereby contributing to our overall case-finding program. In addition the State as a whole has benefited by the work of the Alabama Tuberculosis Association, because, with its funds, many patients have been hospitalized, who otherwise might not have been able to afford even our modest per diem sanatorium rates.

The 35 mm. photo-fluorographic case-finding unit, made available to the State by the Tuberculosis Control Division of the U. S. Public Health Service, has continued to do mass radiography in military and industrial facilities throughout the State. This type of work has been instrumental in elevating the educational level of the public with reference to the importance of x-ray examination in the control of tuberculosis, as well as to uncover a significant number of cases of tuberculosis. The vast majority of these cases were in the early stages of the disease when therapeutic measures could be carried out with a reasonable expectation of success.

Our sanatorium facilities were not increased in 1944. The paucity of beds for the treatment of tuberculosis patients in Alabama constitutes a glaring weakness in our program. During this year we admitted and discharged 904 patients, of whom 227 died in the sanatorium and 13 left against medical advice. With almost an identical number of admissions and discharges for the previous year, a far greater number of patients died in the sanatorium this year and approximately 50 per cent fewer left against advice. Still, the vast majority of cases admitted to our sanatoria continue to have advanced disease. Despite the fact that we have uncovered a significant number of early cases who should have been hospitalized but were not, it is noteworthy that in this year that with limitations in film, equipment and personnel, we have found more new cases of tuberculosis than we have sanatorium beds.

During the year, 18,668 pneumothoraces were administered in our sanatoria, a greater number

than for 1943. However, shortages in trained surgical nurses made it impossible to do as much surgery as would have been desirable. The number of phrenic nerve operations, pneumonolyses and thoracoplasties was sharply reduced as compared with the figures for 1943. In spite of handicaps and limitations, our sanatorium directors are to be congratulated on their efforts to care for a needy group of patients.

Like other divisions, the Division of Tuberculosis Control has been adversely affected by limitations in personnel, equipment and facilities in 1944. Nevertheless, the work was carried on by those who remained in the Division with zealous and unselfish interest. It is through their fidelity and through the cooperation of the county health departments that we have been able to "hold the line."

The beginning of 1945 held little promise for a successful year in the Division of Tuberculosis Control. Further limitations in the amount of film made available to us, resignations and incapacitating chronic illness among members of the staff of this Division contributed toward making the outlook gloomy indeed. Nevertheless, strong measures were taken to organize a control program on a solid foundation of which the State can be proud. This approach was adopted in order that the program might be broadened extensively for the time when personnel, equipment and facilities would be more readily available.

Since the first and most important step in a well organized tuberculosis control program is case-finding and follow-up, steps were taken to improve the quality of this work. For years this Division has provided the various counties with periodic diagnostic clinics, but no established system for following the contacts of known active cases of pulmonary tuberculosis has been adopted. We have drawn up such a follow-up schedule, which is rendering more effective our county clinic work.

During the year we have reviewed most of the records of persons who have been examined in the county clinics throughout the State since the inception of this work, and lists of lapsed contacts have been prepared for the counties. The results of this work have been gratifying indeed. In some counties as high as 14 per cent of a group of these lapsed contacts, whose last x-ray was negative for reinfection tuberculosis, have been found to have early, asymptomatic, but treatable lesions. This measure alone has made a vast improvement in our case-finding program. From the public health viewpoint, these cases have been found before they have become menaces beyond the hope of arrest. From the economic viewpoint of the State, more of these patients can be treated effectively per annum per sanatorium bed. From the patient's viewpoint, the chances of arrest are improved, and from the economic viewpoint of the patient, the cost of hospitalization is less and the period of financial difficulty is shorter. This is a move in the right direction, and it is gaining momentum.

There has been a great need for educational work among this group of lapsed contacts. In

the past it was not made clear to these persons that follow-up for the purposes of protection must be carried out over a period of years. Consequently, when these persons were invited to have another x-ray at a later date, this request was considered to be an imposition on their time. Within the past year we have begun to do educational work along these lines and the interest demonstrated among this group of patients has been greatly improved. In many instances, after educational interviewing, these persons have been instrumental in advising other contacts of the source case to come in for follow-up examination.

As in previous years we have found a great number of cases of tuberculosis in our county x-ray clinics, but again this year the majority of these have been advanced. By adhering to our schedule for following contacts of known cases of tuberculosis we anticipate finding an increasing number of early cases in our county clinics.

In order to avoid the lapsing of contacts henceforth we have developed a simple fool-proof means of following these cases over a period of many years. These devices have already been installed in some of the county health departments, and the testimony of personnel relative to the benefits accrued are recompense enough to those of us who have devised this system. In the due course of time all counties will be provided with such follow-up files. We are grateful to the Elmore County Health Department for its cooperation in assisting us with the experimental stages of this follow-up system.

During this year the Division of Tuberculosis Control has directed the activities of a 35 millimeter case-finding unit which was made available to us through the cooperation of the Tuberculosis Control Division of the U. S. Public Health Service. Mass radiography has been carried out in many industrial plants and several military facilities throughout the State. Persons found to have lesions have been referred to their private physician for follow-up. As a valuable by-product of this work we have found a large number of persons with asymptomatic non-tuberculous chest disease of probable clinical significance.

In addition we have examined the inmates of the State Prisons and the patients of the State Hospitals. Much has been accomplished as a result of this work. Here, where contact is intimate and prolonged, infectious cases have been diagnosed among the supposedly well group and isolated. Also the problem among both these groups has been accurately defined and we have provided the authorities with reliable data as to their current problem, which will allow for making proper plans for adequate facilities in the future.

Although our sanatorium facilities were not increased this year, the 1945 Legislature passed the Henderson, Smith, Simpson, Harris and Stewart Bill, appropriating \$945,000.00 for the construction of additional sanatorium beds, \$500,000.00 of which was earmarked for immediate use. Although limitation in building material prevented immediate action being taken, some

districts have already begun to prepare the preliminary negotiations. This is another important move in the right direction, for if our case-finding program is to be effective, we must have adequate treatment facilities at the earliest possible date.

The Division of Tuberculosis Control has benefited by the funds made available through the cooperation of the Tuberculosis Control Division of the U. S. Public Health Service. This money has made it possible to procure much-needed equipment for treatment centers, film-processing stations and mobile x-ray units mounted on trucks to do mass radiography. In addition, this Division is grateful to the U. S. Public Health Service for having made available to us both regular and consultant personnel.

Rehabilitation work has been carried out through the cooperation of the Department of Education. Although much is left to be desired in this particular phase of tuberculosis control, a start has been made, and we look forward to better work in the future.

The security of dependents of hospitalized and physically incapacitated tuberculous patients is a function of the Department of Public Welfare. If we are to make further progress in our efforts to control and ultimately eradicate tuberculosis, the speed with which we attain our goal is contingent upon the funds appropriated by the State Legislature and administered by the Department of Public Welfare for the support of needy tuberculous persons and their dependents. This is a grave social responsibility which must be understood and met at an early date.

For detailed statistics we refer you to the contribution of the Bureau of Vital Statistics. Briefly it is noteworthy that our total mortality rate has declined further this year. It is noteworthy that the decrease in the tuberculosis mortality rate is more striking for colored persons than for whites. This augurs well for the future. This pattern which is demonstrated over a period of several years raises interesting and important points for consideration which are beyond the scope of this resume.

This year our State mobile units examined a total of 8,823 persons, approximately 20 percent less than last year. Early in the year we examined an average of less than 20 persons per clinic day with two units. With the cessation of hostilities this number was greatly increased, and late in the year our North Alabama Unit resumed activities. In 1946, we should easily double the number of examinations for 1945 and we anticipate finding an unprecedented number of early cases of tuberculosis among lapsed contacts.

During this year, 982 persons were admitted and discharged from our sanatoria, an increase over the figures for 1944. Of these 167 died in the sanatoria, and only 13 left against medical advice. Although advanced untreatable cases of tuberculosis are no longer being referred to our sanatoria for educational purposes, still the vast majority of cases admitted are moderately advanced and far advanced. It is regrettable that too few early, asymptomatic, treatable cases find their way to our sanatoria, though diagnosed, un-

til some later date, during which period of time the disease has become more extensive.

As in the past much praise is due our sanatorium directors and their staff. In addition to coping with shortages in equipment and medical supplies, the entire responsibility of complying with the rationing of food has been an additional time-consuming problem. With the cessation of hostilities and the return of trained tuberculosis specialists we hope to procure additional physicians and nurses for our sanatoria and pneumothorax refill stations, of which we need more of both sorely.

The 35 millimeter mass radiography unit has examined an average of 800 persons per week during the past year, and we have found an overall incidence of 1.7 percent tuberculosis among presumably well groups of the adult population in Alabama. Whereas most new cases found in our clinic work have advanced disease when diagnosed, approximately 75 percent of cases found by mass radiography are minimal in extent.

Thus, although the year began with depression, the accomplishments of the Division of Tuberculosis have been notable. Our work centrally has been completely organized, and we are prepared to organize strong programs in those counties where such work can be carried out. We have made revisions in our activities which will be reflected in a high quality of tuberculosis work being done in the various counties in this State. If this type of program is continued and carried out vigorously, we are certain that the tuberculosis work in Alabama will easily be on a par with that quality of work being done in the most progressive states in this country.

MATERNAL AND CHILD HEALTH

The report of this Bureau for the two years, 1944 and 1945, shows neither progress nor expansion. The impact of the war has been felt as much in maternal and child health services as in any other governmental or county activity. During 1942 and 1943 it was realized that an expansion of, or an improvement in, these services could not be expected, but it was thought that we could at least hold what we had. It was a vain hope. The progress of this Bureau depends upon the services of specialists and the cooperation of practicing physicians, as well as upon the ability of patients to attend the clinics. At first we felt the results of gasoline and tire rationing. It was soon evident that patients lacked transportation to the clinics although cars were pooled and in some instances school buses were used. On account of the increased employment because of the establishment of many war industries and the ensuing increase in incomes, many felt that they did not want to attend free clinics. With the larger number of physicians in the armed services and the overload thrust upon those who remained, we found that a number of our part-time clinicians felt that they were too busy to give several hours a week, or even a month, to these maternity and child health clinics.

The Bureau had a staff of three obstetricians, two pediatricians, and three dentists. During the year 1945 we have had neither obstetrician nor pediatrician and but one dentist. It has been impossible to replace these, and there has been practically no advisory nor supervisory service other than dental. The obstetric and pediatric consultative services were entirely abandoned. With this limitation of services the establishment of new maternity clinics and new child health conferences has not been encouraged, as we felt that our standards could not be maintained.

Due to these varying factors we must report the fact that we had a decrease in activities in the Divisions of Maternal Health and of Child Health. The activities of the Dental Division did not suffer to an appreciable extent, and the Division of Nutrition has expanded as one nutritionist was added to the staff.

A consultant nurse in maternal and child health was added to the staff, and her services have been very valuable in promoting proper care of the premature infants and in assisting hospitals in maintaining standards of maternity and infant care.

MATERNAL HEALTH

In 1944 maternity clinics were held in forty-nine counties with 3,595 sessions and a total of 34,653 visits. In 1945 there were thirty-nine counties holding clinics with 3,453 sessions and 29,761 visits. This shows a decrease of ten counties, of 145 sessions, and of 4,892 visits. The number of clinic centers dropped from ninety-five in 1944 to eighty-eight in 1945. Since 1942 approximately forty clinics have been discontinued. Clinic attendants received 7,865 treatments for syphilis in 1944 and 7,183 treatments in 1945, a drop of 687 treatments. Advice on planned parenthood was given to 1,337 patients in 1944 and to 1,321 in 1945. The number that enrolled in clinics before the sixth month of pregnancy was 4,936 in 1944 and 4,854 in 1945. These clinics in 1945 were conducted by eighty-three practicing physicians as part-time clinicians. Attendance is below average in a few clinics, but as their influence is good it is not advisable to discontinue them.

CHILD HEALTH

The child health conferences suffered little loss during the past year as compared with 1944. In 1944 these conferences were held in fifteen counties and in fourteen in 1945. There were 4,129 visits to the conferences in 1945, and this was 264 less than in 1944; however, since 1942, clinics have been discontinued in twelve counties. Attendance has materially decreased in all but a few of the conferences now operating. During 1945 there were twenty-four practicing physicians who served as part-time clinicians.

In maternal and child health services a consultant nurse has been available. One of her early activities was a demonstration premature infant care program. During the past year the program has consisted mainly of home services to premature infants.

At first the thought of giving necessary care to these infants in the home seemed an impossible task, due to the fact that most of these babies were born in very poor homes with practically no facilities for giving care to even the normal infant. The consultant nurse was faced with the problem of applying scientific knowledge and experience gained from the hospital course to a practical program of home care in all types of homes. The first essentials were to provide means for keeping the infant warm and preventing infection. This was done by the use of improvised heated beds made from strong cardboard boxes lined with newspapers, cloth pads, and heated with bottles of hot water, hot bricks or whatever heating method was available in the home. Midwives were taught by supervising nurse and staff nurses how to make these beds and pads and to arrange bottles and light covering over the babies. The use of a box or incubator makes it possible to isolate the infant from the mother and other members of the family. Midwives and members of the family were taught that premature infants should be handled as little as possible. No baths are advisable until the baby had made adjustments and the condition of the home is favorable. For feeding the infant a sterile medicine dropper with rubber tip and medicine glass was used until it was felt that the infant was strong enough to nurse the breast or be fed from a bottle designed for pre-matures.

Midwives in the majority of the counties were instructed to report all premature births as soon after delivery as they could get a telephone message to the nurse.

Many of the counties have kits which contain clothes especially made for the premature infant. When a nurse receives a call from a doctor or midwife, she takes along this kit and an incubator which can be used with or without electricity.

Other activities consisted in the inspection of 19 hospitals, conducting 24 classes for student nurses, and demonstrations on the care of premature infants before County Medical Societies and midwives.

In the field of maternal and child health services by county health departments, nurses made 21,129 visits to 7,527 antepartum cases in 1945. This was a decrease of 4,636 cases and 8,321 visits as compared with 1944. The postpartum cases seen were 6,304 in 1945 or 2,404 less than in 1944, and the 14,956 visits made were 4,087 less than were made in 1944. The total nursing visits made in 1945 in the interest of maternity care were 36,084 as compared with 48,492 in 1944, a decrease of 12,408 visits. For the promotion of infant care nurses made 52,211 visits in 1945 which was short 23,073 of the number made in 1944. Nursing visits to preschool children were 7,908 less than in 1944. It is seen then that the extremely important visits in the interest of maternity and infant care totaled 35,581 less in 1945 than in 1944. This is due partly to the fact that there were fewer county nurses, but in part because their time is taken up in other activities. During the past year the nurses also made 4,887 visits

to the children under care of the State Crippled Children's Service.

DENTAL HEALTH

Counties having dental clinics in 1945 were thirty-two, an increase of three over 1944, but the total amount of work done was less. This was due to the fact that a number of clinics operated a short time and were discontinued before being well established. Several counties now are ready with equipment, but part-time dental clinicians are not available. In 1944, 5,404 school children made 9,154 visits to the clinics and received 23,891 treatments, both corrective and prophylactic. In 1945, 5,199 pupils made 8,079 visits for a total of 22,266 treatments. This represents a decrease of 205 children, seventy-five visits and 1,623 treatments for 1945. These clinics were conducted by forty dentists as part-time clinicians.

NUTRITION

There have been two nutritionists, but both were not occupied during the entire time. One has been taking a course at Western Reserve University, Cleveland, Ohio, and one was on special work with the University of Alabama. Activities covered assistance to school lunchroom managers, consultative services to various departments and agencies, both professional and lay; demonstrations; talks at community conferences; and the preparation of educational material for exhibits and for general distribution. Special services were given to children at the clinic for crippled children. Practically all the counties were visited and help was given the local staffs in the promotion of their nutrition programs. During these visits many families and individuals were seen, but major emphasis was on the county developing and strengthening its own program. There were 122 visits made with 197 consultations to sixty health departments, 233 to other agencies, twelve to private institutes, eighty-nine to the various clinics, 105 to school lunchrooms and eighty-seven to homes; and twenty-three group talks and demonstrations were given to 805 persons. As a member of a committee appointed by the Governor, the Senior Nutritionist helped in making a nutritional survey of about twenty State institutions, hospitals and camps. This occupied most of the last half of 1945.

SPECIAL PROGRAMS

Emergency Maternity and Infant Care: This program, in the opinion of many physicians, has now served its purpose and should be discontinued. Physicians feel that they should no longer be subjected to the red tape, regimentation, and bureaucratic administration that accompanies the expenditure of federal funds for medical services. Many have participated and are participating through patriotic motives. Many accept less than their usual fees. Some object to the records that must be kept. Others feel that participating indicates that they are in sympathy with socialized federally controlled medical procedures. There can be no doubt that

service men have been benefited and relieved of worry and that the program has helped to maintain morale.

After two starts and two stops due to lack of funds, the program finally was established in June of 1943. Between that date and the end of 1945 there were 16,649 cases authorized for maternity care and for care of sick infants. In 1944 there were 7,759 wives and 375 infants, a total of 8,134, for whom care was authorized. In 1945 there were 6,395 wives and 595 infants, a total of 6,990 cases. The peak was in August 1944 when 925 cases were authorized. The trend has, since then, been downward until in December 1945 there were only 417 cases authorized, 362 maternity and 55 infant. Of particular interest is the number of maternity cases that have hospital care. In Alabama in 1940 of all maternity cases only 30.2% received hospital care and 38.9% in 1944. In 1944, during the first quarter, 63.3% of the EMIC cases received hospital care, and during the last quarter of 1945 this increased to 81.0%. Under the EMIC Program 71.5% of the maternity cases were hospitalized in 1944 and 77.7% in 1945. This, of course, is because many women who could not otherwise afford hospitalization were benefited by the plan, and this at a time when physicians found they could not, on account of increased demand on their time, attend home deliveries. In 1945 maternity cases spent an average of 7.3 days in the hospital; and infants, an average of 13.4 days.

Other results noticed are as follows: More serologic tests for syphilis were made during the antepartum period; more antepartum visits were made; more consultations were made with specialists; and the prolonged care of infants in hospitals, amounting in some instances of prematurity or serious illness to eighty or ninety days, was given. While the average cost for the care of sick infants was \$65.00 in 1945, a few instances occurred where care of infants amounted to \$600 and over. In 1945 the average maternity case cost \$75.00.

The program is to continue for six months after the war is officially declared ended. As the infants now being born under the program will be eligible for care until they are one year old, it appears that the program will be in effect probably two years after the "duration."

Sllossfield Maternity Hospital and Home Delivery Services: These services for the colored people in the Sllossfield area of Birmingham were continued. All medical care is under the supervision of specialists in obstetrics and pediatrics as consultants. A nursing staff separate from that of the county health department is employed and is under the direction of the health department's supervisor of nurses. There were 381 mothers delivered in 1944 and 410 in 1945. Of these 87.1% were delivered in the hospital in 1944 and 97.3% in 1945. In 1944 the maternal death rate was 78.7 (three deaths) and was 0.0 (no deaths) in 1945. The stillbirth rate was 21.0 in 1944 and 17.1 in 1945, but in 1944 the neonatal death rate was 15.7 and was 27.0 in 1945.

During these two years the antepartum cases with positive serology, a history of previous

syphilis, or with clinical evidence of syphilis, were given treatment. Many EMIC patients were delivered at this hospital for which care no payments were made except for physicians' services.

Macon County Medical and Hospital Care Program: This program continued to care for colored women and children, and the persons served probably could not otherwise have had medical attention except as charity. During the two-year period 197 maternity cases and sixty-nine infants were hospitalized for a total of 1,076 days. There were 136 deliveries in the hospital with twenty-four cesarean sections and six sterilizations.

Tuskegee School of Nurse-Midwifery: Under this program there were 409 maternity clinics in which 878 patients were admitted and 2,603 physical examinations made. The nurses delivered 430 patients in their homes. All of this service was properly supervised by qualified nurses and graduate nurse-midwives. Eight student nurses satisfactorily completed the course of study at the school and graduated.

Montgomery County Emergency Maternity Program: This began in 1944 to provide care and emergency hospitalization for wives attending the prenatal clinics. It provides payment for medical and hospital care and for consultation, when needed. Only five cases have required this emergency care since December 1944. It is administered as part of the county health department program and provides an immediate emergency service without the necessity of prior investigation of the patient's economic condition.

This report, showing decreases in maternal and child health services, indicates the effect of the war. The loss of staff specialists in obstetrics and pediatrics is serious. Constant supervision, promotion, and consultative services are essential. Without these specialists to carry the work into all counties, there will be no expansion and improvement. It will not be possible to maintain our usual standards of care. Every effort to fill the positions made vacant by resignations have failed. It is extremely doubtful, with the present salary scale, that appointments will be accepted by specialists with the required qualifications. The higher salaries offered by other states and the much higher incomes from private practice are too attractive.

SANITATION

FOREWORD

During the 2-year period, 1944 and 1945, the Bureau of Sanitation as a whole became more active and accomplished better results than at any time since World War II began. It has operated through its Divisions of Engineering and Inspection. The scope of most activities materially broadened, particularly in 1945.

The Division of Water and Sewerage saw a gradual increase in all activities through this period, gaining most momentum, in so far as new works and improvements were concerned, following the making available of federal funds through the Federal Works Agency for the

preparation of detailed plans and specifications. In addition to carrying out the regular water and sewerage work, considerable ground work was laid looking toward the passage of state stream pollution legislation in 1947.

The Divisions of Malaria Control and Typhus Control, through both regular and federal aid programs, probably saw the greatest expansions, although the work of each was confined largely to certain war and endemic areas. The stage was set for still greater federal aid programs in 1946 as well as more work under returning State and county personnel from the Army and Navy which will serve people of all sixty-seven counties.

The Divisions of General Sanitation and Inspection probably suffered worse from lack of personnel, labor and materials than did any of the others. Inspection work fared some better than did general sanitation, since operation which depends largely upon inspections of sanitarians and sanitation officers was not affected as seriously as maintenance of buildings and equipment. With the return of State personnel from the service, plans were laid during the latter part of 1945 for increased inspection activities for 1946.

The General Sanitation Division stressed the making of sanitation surveys in towns, precincts and counties during the lull of construction activities. A complete survey of swimming pools in the State was also made with reports and recommendations being submitted to the owners. Plans were laid for operating a training school for prospective sanitation officers in the early part of 1946. An inventory of sanitation facilities needed in all the cities and counties of the State was made looking toward some extensive construction programs in the future.

The Drafting Division turned out more work than in any previous 2-year period. This was accomplished by three full-time draftsmen and the assistance of four engineers and two entomologists during the winter months. All except a maximum of two draftsmen were on the federal payroll.

WATER AND SEWERAGE

Public Water Supplies: The control and supervision of all public water supplies in the State is in accordance with legislative acts, which acts specifically state the responsibilities of the State Board of Health and its authorized representatives.

Inspections are made of all public water supplies at least once each year for the purpose of checking the water works equipment, checking operating procedures, giving instructions to operating personnel, and advising water works officials concerning water problems and needed improvements. In most instances, reports including recommendations are submitted to the proper officials covering each individual inspection. A total of 735 inspections were made of water works properties during the years 1944 and 1945.

The 247 public water plants supplying water for domestic use to 294 public supplies submitted a total of 26,460 samples to the State Laboratories for bacteriologic analyses during these periods. The analyses were made by the laboratory personnel. The interpretation of the reports, advising the owners of the supplies in regard to unsatisfactory reports of analysis, and securing improvements to assure a safe water supply were the responsibilities of the Department's engineers.

The Bureau is responsible for checking plans and specifications for all proposed improvements to water supplies and the issuance of permits authorizing the proposed improvements. During the war years, improvements in the water works field were limited to those projects considered essential for the protection of an adequate and reasonably safe water supply. Permits were issued to sixty water works for modification, improvements or alterations of the present supply. These projects varied from the installation of hypochlorinators to the construction of additional structures. The total cost of these improvements is estimated to be approximately \$333,000.

Forty-six permits were issued for new water works and new sources of supply. Thirty-one of the forty-six permits were issued granting authority to construct or use wells as a source of water supply and ranged in cost from \$500 to \$20,000. The total estimated cost of the projects is \$797,600.

In the 2-year period, thirty-one towns and cities completed improvements, modifications or alterations to water supplies, representing a total monetary value of \$2,004,200.

The importance of maintaining public water supplies in the best possible manner appears to be realized by the responsible officials as reflected in their interest in securing improvements to the present supplies and by the interest shown in the development of new systems in communities that are not at present served with water under pressure. The availability of funds to municipalities by the U. S. Government for planning has acted as a stimulus in some cases.

At the end of the year 1945, five of the fourteen cities with a population of over 10,000 (1940 Census) had engaged engineers to make studies of needed water works improvements. Twenty-one communities of the 2,500-10,000 population group have employed engineers. Eighteen communities of the 1,000-2,500 population group and twelve communities with a population of 1,000 or less have engaged engineers for water work studies.

Material and labor, at the end of 1945, were still of concern to water works management. It is anticipated that only the most urgently needed projects will be given consideration for construction in the immediate future due to the uncertainty of materials, labor and excessive over-all costs.

In addition to major activities, forty-five inspections of supplies were made and reported to the U. S. Public Health Service for certifica-

tion for use by interstate carriers. Sixty-eight reports were submitted to the U. S. Public Health Service for its consideration concerning the inspection of water-point sanitation of the various carriers.

Engineers spent considerable time in consultation with consulting engineers, army and navy personnel, and other officials interested in water works problems and developments.

Sewerage: The need of stream pollution abatement by proper treatment and disposal of domestic sewage and industrial waste has been recognized by the Department for some time. With the increased centralized population and industrial development, stream pollution is becoming more of a problem, particularly in certain areas. Realizing this, the Department prepared legislation for consideration by the 1945 Legislature. The bill, however, was not reported out of committee. Since the legislative session, plans have been formulated to advise municipalities, industries and wild life organizations of the proposed bill. The State Department of Health has also endorsed certain national legislation that it feels is needed to secure uniform abatement.

The restriction of materials and equipment as well as the shortages in labor limited the sewerage works improvements during 1944 and 1945 to municipalities and industries within the war areas, with the exception of a few septic tanks for schools and housing projects. During this period only sixteen projects, at a total estimated cost of \$1,747,500 were completed. In this same period eighteen permits were issued for sewerage and sewage treatment projects, at an estimated cost of \$2,045,800. Most of this proposed work is awaiting favorable construction activities.

Technical service was given to practicing engineers and the Department cooperated with the State Planning Board in the proposed improvements to sewerage works. Approximately one hundred and twenty visits were made in this connection and in supervising plants in operation.

Advice in planning and technical aid was given the University of Alabama throughout 1944 and 1945 on the pollutional study of the Warrior River water shed. This study has progressed and the personnel of the University is planning to prepare a preliminary report of their activities within the near future.

MALARIA CONTROL

The functions of the malaria control section include supervision of impounded waters, operation of the Malaria Control in War Areas program, including DDT residual spraying, and special investigations of malaria problems.

During the 2-year period, 1944-1945, one hundred seventy-one new projects were added to the department's records of minor impounded water projects, bringing the number now on record to 1,136. A total of 114 preliminary permits were issued, while authority to impound was granted for 28 projects. Representatives of county health departments made 301 inspections of these projects.

There are twenty-five major impoundments (projects having an area greater than 100 acres) within the State. Larvicidal operations, including the application of 165,798 gallons of oil and 603,375 pounds of Paris green, were in effect on fourteen of these lakes, being supplemented in nine instances by either shoreline maintenance, variation of the water level or a combination of the two. Fluctuation of the water level at weekly intervals was sufficient to provide satisfactory mosquito control on four reservoirs. In an effort to provide further malaria protection to those persons living near the most serious mosquito producing areas of Gunter'sville and Wheeler Reservoirs, the Tennessee Valley Authority mosquito proofed 290 houses, performed maintenance work on existing mosquito proofing and treated 342 houses with DDT residual spray. A new reservoir which is to serve as a source of water supply for the city of Opelika was under construction during 1945. Preparation of the area to be flooded was practically complete by December and this reservoir will be filled early in 1946. Visits were made to nine major impoundments during 1944 and seven in 1945, while a preliminary malaria control survey was made of a proposed reservoir to be impounded on the Tombigbee and Warrior Rivers by the construction of a dam near Demopolis.

A program of malaria control in areas contiguous to military and essential industrial establishments, sponsored jointly by the U. S. Public Health Service and the State Department of Health, was in operation during the period. Under this program malaria control measures were applied in nine areas while thirteen others were under entomologic surveillance. Activities included the elimination of ninety acres of mosquito breeding areas by filling 4,300 square feet of ponds and constructing 72,947 linear feet of ditches. Larvicides, including 13,919 gallons of oil and 1,732 pounds of Paris green, were applied to mosquito breeding waters which could not be eliminated. Through these efforts, control of malaria mosquito production within one mile of military establishments was satisfactorily maintained.

During February 1944, the U. S. Public Health Service, in cooperation with the State Department of Health and the Mobile County Board of Health, established an *Aedes aegypti* control program in the city of Mobile. This program, operating the remainder of 1944 and throughout 1945, is designed to reduce the prevalence of the vector of yellow and dengue fever in port cities where the introduction of *Aedes aegypti* infected with this disease is most likely. During winter months, personnel attached to this unit surveyed the sanitary conditions of a considerable portion of Mobile in addition to routine activities.

Experiments on the use of DDT as an insecticide for mosquito control was carried out in 1944 and, on the first of April 1945 a large scale DDT residual spraying program for malaria control was begun in Autauga, Dallas, Greene, Lowndes, Marengo and Montgomery counties. In 65 beats located in these counties all occupied

rural houses were treated with DDT if the occupants so desired. During the mosquito season approximately 19,000 houses were sprayed, with only 1.5% of the occupants who were contacted refusing to permit treatment of their houses. As it was necessary to treat each house twice during the season a total of 38,665 house treatments were made, involving the use of 18,120 pounds of DDT or an average of 0.47 pounds per house. Larvicidal projects were organized for all cities within beats selected for DDT treatment and seven projects of this nature were operated simultaneously with the residual spraying program. Data are not available from which definite conclusions can be drawn regarding the effectiveness of DDT in reducing malaria transmission. However, the enthusiasm with which the program was received and reports from occupants of treated houses indicate that DDT is an effective means of reducing the insect population within houses. A total of 649 houses which had been treated with DDT were inspected for mosquitoes. Of this total, 34 or 5.2% contained live mosquitoes at the time of the inspection. As a comparison, mosquitoes were found in 35.6% or 231 of the 649 out buildings inspected at the same time as the treated houses.

An anopheline and reconnaissance survey was made of eleven counties in the late summer of 1945 to accumulate information regarding the potential malaria mosquito hazard. This information, together with malaria mortality statistics, was used to evaluate the malaria problem in the individual county.

During 1944 seventeen investigations were made of sites proposed for occupation by military establishments.

In addition to work on minor and major impounded water projects, personnel assigned to the malaria section supervised the operation of the Malaria Control in War Areas program and gave technical direction and assistance to supervisors of local projects. Approximately eighty-five persons were employed on these projects during the peak of operations.

SANITATION

During the years 1944 and 1945, 67,387 persons provided themselves with 13,047 new approved sanitation units, consisting of 5,722 pit privies, 2,452 septic tanks, and 4,871 sewer connections. The restoration of 1,167 units of sanitation not effective in the protection of public health was made for 7,870 persons. Thus, 75,257 persons were served through the installations of 14,214 new and restored facilities. Due to shortages in material and labor and the loss of sanitation officers and district engineers to the armed forces, sanitation work in the State was greatly curtailed.

The outstanding piece of work on general sanitation during these two years was the organized sanitation program in the city of Montgomery. The county health department, working under the city's sanitation ordinance, made excellent progress toward the elimination of the outmoded, ineffective and insanitary box and can type of privy which has long been prevalent in Montgomery. During this period 3,002 approved

privies, 93 septic tanks and 1,055 sewer connections were installed. This was 32% of all work accomplished in the State during the two-year period. Several weeks during 1944 were spent on a sanitary survey of Tuscaloosa, looking toward a program similar to the one now being carried out in Montgomery. A similar survey of Mobile was begun in the latter part of 1945.

A state-wide survey of swimming pools was completed with the inspection of 139 swimming pools and other bathing places during the 1944 and 1945 bathing seasons.

TYPHUS CONTROL

The death of the Typhus Control Division director, Dr. A. J. Perolio, on February 14, 1945, was a loss which was keenly felt by the State Health Department. Dr. Perolio was recognized as being courageous and authoritative in the field of typhus control. The direction of the activities was assumed by one of the engineers of the Bureau of Sanitation.

Probably the most important activity was the assumption of full direction of all typhus control activities in the State, including those formerly exercised by the U. S. Public Health Service. This occurred July 1, 1945, at the beginning of the federally financed DDT dusting program for typhus control. Approximately \$90,000 was allotted Alabama, with a manpower ceiling set at fifty-one men. At the end of 1945, projects were operating in eight counties, varying according to local participation. Poisoning, gassing, trapping and sanitary survey work were being carried on in conjunction with these projects.

During the two years the program of assisting municipalities, civic clubs and other organizations with poisoning campaigns was continued. During the calendar year 1944, twenty-one such campaigns were conducted using 5,730 pounds of bait, costing approximately \$2,545. In 1945, fifty campaigns were conducted using approximately 18,560 pounds of bait and costing \$8,400. In addition to this, there were several towns worked the second time during the year by the sanitation officer, with the Typhus Division giving very little assistance.

During this 2-year period, one county (Houston) appropriated \$15,000 to defray its part of the expense of a county-wide campaign in cooperation with the State Health Department and the U. S. Public Health Service. The work actually began July 1, 1945. Two counties (Dale and Covington) provided money for the salary and travel of a full-time man on typhus control. These men worked approximately 1,910 premises at or near where typhus cases have occurred.

Rat stoppage programs were begun in three relatively heavy typhus areas: Mobile, Dothan and Brewton. The Mobile program was in progress at the end of 1945. The work in Brewton was about three-fourths complete and had for all practical purposes ceased in Dothan at the close of the year.

DRAFTING

The work in the drafting division during 1944-1945 reflects the trend of State and national activities, following closely the rapidly changing

scenes leading up to the end of the war.

At the beginning of 1944 the spread of typhus-infected reservoirs near military areas and in overcrowded urban centers required innumerable charts and maps.

Malaria Control in War Areas, which had become activated early in the war, now became accelerated. In addition to the MCWA program during 1944, advance work on a large number of index maps showing beats occupied a great part of the fall work. In early 1945, a great amount of work was done on tracing aerial photographs which were used in the DDT spraying operations of the Extended Malaria Control program. As the year's work progressed, increasing amounts of mapping work were required for both MCWA and Typhus Control.

The Emergency Maternal and Infant Care Program for soldiers' wives was larger in 1944 than it had been at any other time, reaching its peak in 1945. A great deal of work on charts, graphs and stencils was required for this program.

In 1944 a set of special posters was prepared for display during the meeting of the Alabama Medical Association. Illustrations, maps and charts for a bulletin setting forth the activities of the entire health department were made for the Division of Public Health Education.

As the MCWA and typhus control programs continued their expansion, plans for two additional rooms to the rear of the building were drawn up, the contract let, and in December 1945 the building was completed and ready for occupancy. Plans were also drawn and the contract let for the construction of library shelving, which was built in a room adjoining the drafting room. When this was completed, the technical library of the Bureau of Sanitation was moved down from the main health department and installed. This has greatly improved the facility of the valuable collection of technical information which has been indexed and which is under the direction of the Division of Engineering.

In addition to all special work, the drafting section has made during 1944 and 1945 many charts, maps and miscellaneous illustrated stencils and posters for the various bureaus of the health department—graphic presentation of two full years' work under wartime conditions.

INSPECTION

The Division had only five field inspectors during most of 1944 and 1945. Near the end of 1945, one man who had been on sick leave returned to duty and another returned from military leave. A veterinarian was hired in June 1945 to work with county health departments on application of meat plant regulations which were adopted by the State Committee of Public Health on July 11, 1945. The total number of inspections made by the State inspectors decreased approximately 10% during the two years.

Loss of county inspection personnel continued throughout the biennium, until at the end of 1945 there were twenty-eight counties with no inspection programs; fourteen in which inspection and sanitation work was being done by seven men, each having two counties; thirteen

in which a single sanitation officer employed full-time for one county did inspections; eleven in which one or more persons were assigned full-time to inspection work; and one in which a veterinarian was employed part-time to do food inspection.

Food inspection programs were carried on at least part of 1945 in forty-two counties. The numerical average of the county food ratings for these counties was 89.8%, slightly lower than the average two years previous. Two food-borne epidemics involving 112 cases were reported in 1944, and six involving approximately 200 cases were reported in 1945.

Milk inspection programs were discontinued in counties losing inspection personnel, until at the end of 1945 milk inspection was being done in thirty-nine cities. In six additional counties some dairies were being graded under county board of health regulations. The milk shortage, which first became evident in 1942, continued throughout the period despite the fact that production and sale of graded milk doubled in the four-year period following 1941, increasing approximately 30% in 1944-45. The volume of milk receiving the added protection of pasteurization increased even more than total sales, being about four-fifths (82%) of the entire supply at the end of the biennium. The weighted average retail raw milk rating in the thirty-nine cities carrying on milk inspection programs under the State Board of Health Milk Regulations was 81.8% in 1945, approximately 4% lower than in 1943. This figure for pasteurized milk in 1945 was 80.2%, 5% lower than two years previous. Pasteurization plants were installed in seven cities during the biennium for which no pasteurized milk had previously been available. Two cities which had never previously carried on milk sanitation programs adopted the State Board of Health Milk Regulations.

A majority of the oyster shucking plants were rebuilt or extensively remodeled to comply with new regulations which were adopted in 1945. A number of crabmeat picking and shrimp packing plants were also rebuilt.

VITAL STATISTICS

During the year 1945 the work of registering original certificates of birth, death, stillbirth, marriage and divorce, one of the most important duties of the Health Department, was accomplished successfully. A simplified system of accounting for the fees received for certified copies was introduced and has greatly improved the recording and filing procedure.

Cooperative work has been continued with the federal Bureau of the Census in an effort to improve registration throughout the State. Transcripts of all birth, death and stillbirth certificates have been made and sent to the Census Bureau for inclusion in the national compilation of vital statistics. It is through cooperation with the federal Bureau of the Census that we use the government free mailing (franking) privilege which amounts to a great saving in postage expenditures.

The need for certified copies of records has resulted in a continuous public demand throughout the year. A slight decline in the number of requests for certified copies was noticed shortly after the end of the war, but near the end of the year the demand had increased again. Veterans find that one or more certified copies of birth and marriage records are needed in order to obtain pensions and other benefits under jurisdiction of the Veterans Administration. An even greater demand by veterans for certified copies is anticipated as more and more men return to civilian life and take advantage of benefits provided by the "G. I. Bill of Rights" and the Veterans Administration. Copies of vital records needed for these veteran benefits are issued free of charge.

During 1945 a total of \$35,255 was received in fees and of this amount \$5,619.50 was paid by persons who came to the State Health Department to get their certificates. These receipts represent a total of 70,510 certified copies which does not include 5,188 copies issued free of charge for use by the Veterans Administration. The number of free copies issued in the future will, in all probability, grow in proportion to the increase in the veteran population.

Correcting records consumes a great amount of the clerical time of the Bureau. During 1945 a total of 23,237 correction affidavits were processed. In other words, approximately one-third of all records from which certified copies were made had to be corrected. This situation reflects no credit upon the attendants at birth and death who are responsible for the preparation of the appropriate records. Misspelling of names is the most common error, although, among other needless errors, incorrect reporting of the sex of a newborn child happens with surprising frequency. As a means of correcting obvious errors and in order to complete records received currently the Bureau mailed out 11,898 query forms during 1945 and received 9,348 replies to these. The reliability of public health statistics depends upon complete and accurate reporting of life and death events. The cause of death is too frequently ill defined or not given. Diseases of the heart and accidents are causes of death which frequently have to be queried before a specific cause can be coded for statistical purposes. The Bureau is continuing to mail a photostat copy of all birth certificates filed to the parents along with a correction blank to be returned with indicated corrections which should be made. This system works effectively and contributes to correct and complete records.

During 1945 a total of 72,680 birth certificates, 25,039 death certificates, 2,282 stillbirth certificates, 18,599 delayed certificates of birth, 40,809 marriage records, and 11,298 divorce and annulment reports were filed in the office of the State Registrar. In addition to these newly filed records, new certificates were prepared and filed for 437 adoption and 378 legitimation cases in compliance with the legal provisions pertaining.

TRENDS IN VITAL STATISTICS

Deaths: Alabama's general death rate of 8.7 per 1,000 inhabitants in 1945 is the lowest in the

State's past thirty-year vital statistics history. The recently completed provisional report for 1945 was published in the May issue of the Journal of the Association. In numerical terms, there were 25,039 deaths in Alabama in 1945 as compared with 26,065 in 1944 when the rate was 9.0 per 1,000 population. The annual average for the five-year period, 1940-1944, was 27,445 deaths which occurred at a rate of 9.5 per 1,000 population.

One of the most encouraging revelations coming out of the 1945 provisional report of vital statistics is the decline in the number of infant deaths, that is, deaths among babies under a year old. The total for 1945 was 3,120 with a rate of 42.9 per 1,000 live births as compared with 3,391 infant deaths with a rate of 45.7 per 1,000 live births for the year 1944. During the five-year period, 1940-1944, the number of infant deaths averaged 3,347 annually with a rate of 47.3 per 1,000 live births. This rate is high and is above the national average (38.1) but the decline does denote progress as do the statistics on maternal deaths, of which there were 230 in 1945, with a rate of 30.7 per 10,000 total births, compared with 284 in 1944 when the rate was 37.2. Statistics on maternal deaths denote considerable progress in public health when it is considered that during the five-year period, 1940-1944, the average annual maternal death rate was 43.9 per 10,000 total births. There can be no doubt that more mothers and babies have received both prenatal and postnatal care during the war years than ever before. The benefits of this service are unquestionably reflected in the reduction of infant and maternal death rates.

Of the principal causes of death, cancer and diabetes show increases over 1944. The causes maintain the same relative position when ranked in order of their importance although death rates for nephritis, pneumonia, tuberculosis, influenza and syphilis show a marked decrease over 1944. The table below shows the number and rate for each of the ten leading causes of death during 1945, 1944 and for the five-year average, 1940-1944.

Ten Major Causes of Death

Cause	1945		1944		Average 1940-1944	
	Number	Rate	Number	Rate	Number	Rate
Diseases of heart (90-95)	5,120	176.9	5,121	177.0	5,046	174.3
Intracranial lesions (83)	2,397	82.8	2,387	82.5	2,356	81.4
Cancer (45-55)	2,173	75.1	2,087	72.1	1,907	65.9
Nephritis (130-132)	2,064	71.3	2,201	76.1	2,339	80.8
Accidents (169-195)	1,855	64.1	1,868	64.5	1,872	64.6
Pneumonia (107-109)	1,258	43.5	1,445	49.9	1,536	53.0
Tuberculosis (17-22)	1,161	40.1	1,240	42.8	1,349	46.6
Influenza (33)	405	14.0	622	21.5	725	25.0
Syphilis (30)	363	12.5	423	14.6	467	16.1
Diabetes (61)	356	12.3	327	11.3	353	12.2

In the field of communicable disease treatment good progress was made during 1945. The provisional report reveals a numerical decrease in the number of deaths during the year from contagious diseases—except those of typhoid fever and poliomyelitis. The death rate from malaria

continued downward from that of the previous years. No deaths due to scarlet fever were reported. The table below shows the numbers and rates for this group of causes for 1945, 1944 and the 1940-1944 average.

Deaths from Communicable Diseases

Cause	1945		1944		Average 1940-1944	
	Number	Rate	Number	Rate	Number	Rate
Whooping cough	85	2.9	89	3.1	116	4.0
Meningitis	59	2.0	82	2.8	43	1.5
Measles	4	0.1	86	3.0	56	1.9
Diphtheria	57	2.0	59	2.0	55	1.9
Typhus fever	38	1.3	47	1.6	26	0.9
Malaria	35	1.2	40	1.4	103	3.6
Typhoid fever	18	0.6	17	0.6	22	0.8
Poliomyelitis	22	0.8	11	0.4	24	0.8
Scarlet fever	—	—	3	0.1	7	0.2

Births: The birth rate for 1945 shows a slight drop as might well be expected with so great a proportion of the male population in foreign lands. A total of 72,680 births was registered in the year 1945, a rate of 25.1 per 1,000 population. In 1944 a total of 74,182 births was recorded at a rate of 25.6 per 1,000 population. The five-year average, 1940-1944, shows 70,804 births with an annual rate of 24.5. Thus, it is revealed that during the war years the birth rate has fluctuated due to population shifts and separation of married couples engaged in war employment and military service. The first year of war resulted in the expected increase in the birth rate which reached a peak in 1943 with a rate of 27.1 per 1,000 population. By 1944 the size of our armed forces in foreign lands had grown to proportions which began to affect the birth rate inversely. If demographic history of other war periods repeats itself, the birth rate will soon begin to rise again as the size of the armed forces is decreased.

Marriages and Divorces: The total of 40,809 marriage records and 11,298 divorce reports filed for 1945 shows a substantial increase over 1944 during which a total of 39,316 marriage records and 9,426 divorce reports was filed. The last quarter of the year 1945 brought about a pronounced increase in the number of marriages which will, in all probability, continue through the coming year. An increase in marriage and divorce rates, like that of birth rates, is a phenomenon associated with war periods.

The report of the Board was adopted as a whole.

REVISION OF THE ROLLS

The next order of business being the revision of the Rolls of the Association, the Secretary was directed by President Scott to proceed without interruption in the absence of objection. As a preface to the revision of the Roll of County Societies, the Secretary said:

"County Medical Societies, to comply with the Constitution, must meet certain obligations. First, an annual report, on forms furnished by the Association, must be filed with the Secretary; sec-

ond, each society is expected to be represented at the annual meeting by at least one delegate; and, third, dues are to be remitted for each member not exempt from payment of dues."

With this foreword, the revision proceeded.

1. Revision of the Roll of County Societies:

(a) County societies which have fulfilled all their constitutional obligations: Autauga, Baldwin, Barbour, Bibb, Butler, Calhoun, Chambers, Cherokee, Chilton, Clarke, Clay, Cleburne, Coffee, Colbert, Covington, Cullman, Dale, Dallas, DeKalb, Elmore, Escambia, Etowah, Fayette, Franklin, Geneva, Houston, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Limestone, Madison, Marengo, Marion, Marshall, Mobile, Monroe, Montgomery, Morgan, Perry, Pickens, Randolph, Shelby, St. Clair, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, Washington, Wilcox, Winston.—Total 53.

(b) County societies partially delinquent: In that they are not represented by delegates at this meeting of the Association: Blount, Bullock, Choctaw, Conecuh, Coosa, Crenshaw, Hale, Henry, Lamar, Lowndes, Macon, Pike and Russell.—Total 13.

(c) County societies totally delinquent: Greene.

No objection being made as to the correctness of this report, the President directed the Secretary to write the society delinquent in report and dues and, failing to remove the delinquencies, to call the society to the attention of the State Board of Censors.

Whereupon the roll of County Medical Societies was declared closed until the next annual session of the Association.

The Secretary then said:

"In revising the Roll of Counsellors, five lists are prepared, designated respectively: (1) the schedule of counsellors clear on the books; (2) the schedule of delinquent counsellors—counsellors delinquent in attendance or dues, or against whom charges may be pending; (3) the schedule of miscellaneous counsellors—counsellors who have died since the last annual meeting, or have offered their resignation, or have moved out of the state, or out of their respective congressional districts; (4) the schedule of active counsellors of twenty years' standing; and (5) the schedule of counsellors-elect who have qualified as provided in the Constitution."

With such preface, the revision of the rolls was continued.

2. Revision of the Roll of Counsellors:

(a) Counsellors clear on the books: Abbott, Acker, Alison, Anderson, Austin, Barber, Bell, Belue, Boyd, Bragg, Brown, Brunson, Cannon, Carraway, Carter, Chenault, Cloud, Cocke, Col-

lier, Conwell, Craddock, Daves, Davis, Denison, Eskew, Ford, Garber, Gibson, Godard, Granger, Gresham, Grote, Hatchett, Hill, R. C., Hill, R. Lee; Hodges, Howell, Isbell, Jackson, Jones, C. T., Jones, J. Paul, Kennedy, Killian, Killingsworth, King, Lisenby, Martin, McCaslan, Meadows, Moore, C. W. C., Moore, D. S.; Morgan, J. O., Morgan, J. Ralph, Noland, Oswalt, Owings, Parker, Partlow, Perdue, Riggs, Riser, Roan, Salter, Scarbrough, Segrest, Sewell, Sherrill, Simpson, John W., Simpson, H. M.; Skinner, Tankersley, Thacker, Tillman, Waters, Watson, Weil, Welch, Weldon, White, Whiteside, Wilson, Woodruff, Wright.

In the absence of objection, the President ordered passed the names of these counsellors reported as clear on the books:

- (b) Delinquent Counsellors: None.
- (c) Miscellaneous Counsellors:
 - (1) Life Counsellors who have died: Glenn Andrews, M. H. Hagood, L. L. Hill, Clarence Long, E. M. Mason and R. A. Smith.
 - (2) Active Counsellors who have died: S. L. Ledbetter, Jr., W. A. Lewis and G. F. Walsh.
 - (3) Active Counsellors who have moved: None.
 - (4) Active Counsellors who have resigned: None.
- (d) Active Counsellors of twenty years' standing: R. H. Redden and W. R. Taylor.
- (e) Counsellors-Elect who have properly qualified: H. W. Allgood, J. L. Branch, R. B. Dodson, D. C. Donald, R. A. Foshee, A. C. Gipson, W. C. Golden and E. F. Leatherwood.

The President directed that the names of the deceased counsellors be transferred to the Book of the Dead; that R. H. Redden and W. R. Taylor be transferred to the Roll of Life Counsellors; and that to the Roll of Active Counsellors be added H. W. Allgood, J. L. Branch, R. B. Dodson, D. C. Donald, R. A. Foshee, A. C. Gipson, W. C. Golden and E. F. Leatherwood.

Whereupon the President declared the Roll of the College of Counsellors closed until the next annual session of the Association.

3. Revision of the Roll of Correspondents:

Dr. Alton Ochsner, the 1946 Jerome Cochran Lecturer, was added to the Roll of Correspondents.

4. Revision of the Roll of Officers:

Dr. Carl A. Grote, of Huntsville, was elected President; Dr. J. Paul Jones, Vice-President of the Southwestern Division, and Dr. J. O. Morgan, Northeastern Division, for terms of four years, Dr. Jones' term dating from 1945; Drs. E. V. Caldwell and M. S. Davie, Censors for five years from

1945; Drs. M. Y. Dabney and K. A. Mayer, Censors for five years from 1946; and Dr. J. L. Branch, Censor to serve until 1948, completing the unexpired term of Dr. C. A. Thigpen, resigned.

Committees constitutionally provided to nominate counsellors brought in the following nominations, and the nominees were elected by the Association: 1st District—W. T. Cocke; 2nd—N. W. Killingsworth and H. W. Waters; 3rd—F. H. Boyd and M. W. Samford; 4th—F. H. Craddock, Marcus Skinner and Jerre Watson; 5th—C. E. Ford and J. O. Morgan; 6th—C. E. Abbott; 7th—J. G. Daves, Merle E. Smith, L. C. Davis, R. Lee Hill, D. H. Wright and M. S. White; 8th—H. M. Simpson and R. D. Wright; 9th—C. O. King,* J. D. Sherrill, J. R. Garber, D. S. Moore, Joe M. Donald and E. G. Givhan, Jr.

Miscellaneous Business

The Association adopted a resolution introduced by Dr. K. A. Mayer of Lower Peach Tree expressing gratitude to the Jefferson County Medical Society, the hotels of the city, and the press and radio for the many courtesies shown it during the session.

The Association was invited to return to Birmingham for its 1947 session, and the invitation was accepted.

President Grote and other newly chosen officers were presented, whereupon the Association was declared adjourned to meet in Birmingham, April 15, 16 and 17, 1947.

THE ROLL OF COUNSELLORS

REVISION OF 1946

LIFE COUNSELLORS

Name and Address	Date of Election
Acker, Paul Jerome Morris, Mobile (1)	1923
Alison, Samuel Blakemore, Minter (4)	1919
Ashcraft, Virgil Lee, Reform (7)	1919
Bedsole, James G., Jackson (1)	1922
Bondurant, Eugene DuBose, Mobile (1)	1894
Burdeshaw, Shelby L., Headland (3)	1921
Caldwell, Edwin Valdivia, Huntsville (8)	1918
Chenault, Frank L., Decatur (8)	1917
Dabney, Marye Y., Birmingham (9)	1923
Davie, Mercer Stillwell, Dothan (3)	1904
Dowling, Judson D., Birmingham (9)	1922
Faulk, William M., Tuscaloosa (6)	1913
Gordon, Samuel A., Marion (6)	1913
Gragg, Vincent J., Magnolia Springs (2)	1921
Gresham, George L., Speigner (4)	1913
Guice, Charles Lee, Gadsden (5)	1899
Harris, Seale, Birmingham (9)	1903
Harrison, William Groce, Birmingham (9)	1896
Hayes, Charles Philips, Elba (3)	1920
Hayes, Julius Pope, Clanton (6)	1920
Heacock, Jos. D., Birmingham (9)	1912
Heflin, Wyatt, Birmingham (9)	1893
Hill, Robert L., Winfield (7)	1924
Hill, Robert Somerville, Montgomery (2)	1898
Howell, William Edward, Haleyville (7)	1918

*Dr. King died May 6, 1946.

Howle, James Augustus, Hartselle (8)	1895
Hubbard, T. Brannon, Montgomery (2)	1924
Jackson, Alva A., Florence (8)	1918
James, Norman G., Hayneville (2)	1921
Leach, Sydney, Tuscaloosa (6)	1920
Lester, Belford S., Birmingham (9)	1923
Lightfoot, Phillip Malcolm, Shorter (3)	1918
Lull, Cabot, Birmingham (9)	1919
Lupton, Frank A., Birmingham (9)	1913
Martin, James Cordie, Cullman (7)	1917
Mason, James Monroe, Birmingham (9)	1918
Mayer, Kossuth Aaron, Lower Peach Tree (1)	1919
McAdory, Edward Dudley, Cullman (7)	1920
McCain, William Jasper, Livingston (6)	1898
McCall, Daniel T., Mobile (1)	1923
McLeod, John Calvin, Bay Minette (2)	1911
McLester, James Somerville, Birmingham (9)	1913
Mohr, Chas. A., Mobile (1)	1909
Partlow, William Dempsey, Tuscaloosa (6)	1909
Ralls, Arthur W., Gadsden (5)	1919
Redden, Raymond Hollis, Sulligent (7)	1926
Rucker, Edmon W., Birmingham (9)	1922
Sankey, Howard J., Nauvoo (7)	1914
Scott, Walter F., Birmingham (9)	1922
Searcy, Harvey Brown, Tuscaloosa (6)	1923
Shropshire, Courtney W., Birmingham (9)	1922
Sledge, Edward S., Mobile (1)	1922
Speir, Phillip V., Greenville (2)	1917
Talley, Dyer Findley, Birmingham (9)	1902
Taylor, Woodie R., Town Creek (8)	1926
Thigpen, Charles Alston, Montgomery (2)	1900
Thomas, Eugene Marvin, Prattville (4)	1920
Waldrop, R. W., Bessemer (9)	1922
Walker, Alfred A., Birmingham (9)	1923
Walls, J. J., Alexander City (5)	1924
Ward, Henry Silas, Birmingham (9)	1915
Wilkinson, Fred Wooten, Montgomery (2)	1919
Wilkinson, David Leonidas, Birmingham (9)	1902
Total 63	

ACTIVE COUNSELLORS

Those marked with a † are serving last terms of six years.

Those marked with an asterisk (*) are serving second terms of seven years.

Those without a symbol are serving first terms of seven years.

The numeral is the number of the congressional district.

	Date of Elec- Expi- tion ration
Abbott, Chas. E., Tuscaloosa (6)	*1945 to 1952
Acker, Charles T., Montevallo (6)	*1944 to 1951
Alison, James F., Selma (4)	*1941 to 1948
Allgood, Homer W., Fairfield (9)	1944 to 1951
Anderson, Thos. J., Greensboro (6)	*1940 to 1947
Austin, Burton F., Montgomery (2)	1941 to 1948
Barber, William J., Butler (1)	1942 to 1949
Bell, J. Mac, Mobile (1)	1943 to 1950
Belue, Julius O., Athens (8)	*1944 to 1951
Boyd, Frank H., Opelika (3)	*1946 to 1953
Bragg, John C., Decatur (8)	1941 to 1948
Branch, John L., Montgomery (2)	1944 to 1951
Brown, Elridge T., Cleveland (7)	*1944 to 1951
Brunson, Emmett T., Samson (3)	*1943 to 1950
Cannon, Douglas L., Montgomery (2)	†1942 to 1948
Carraway, Chas. Newton, Birmingham (9)	1942 to 1949
Carter, William R., Repton (2)	*1941 to 1948
Chenault, Erskine M., Decatur (8)	*1942 to 1949
Cloud, Robert E., Ensley (9)	1941 to 1948
Cocke, William T., Demopolis (1)	*1946 to 1953
Collier, James P., Tuscaloosa (6)	1940 to 1947
Conwell, H. Earle, Birmingham (9)	1942 to 1949
Craddock, French H., Sylacauga (4)	†1946 to 1952
Daves, James G., Cullman (7)	*1945 to 1952

	Date of Elec- Expi- tion ration
Davis, Lewis C., Gordo (7)	*1946 to 1953
Denison, George A., Birmingham (9)	1943 to 1950
Donson, Robert B., Cullman (7)	1944 to 1951
Donald, Dan C., Birmingham (9)	1944 to 1951
Eskew, M. H., Uniontown (6)	*1941 to 1948
Ford, Charles E., Roanoke (5)	*1946 to 1953
Foshee, Reuben A., Alexander City, Rt. 5 (5)	1944 to 1951
Garber, James R., Birmingham (9)	†1946 to 1952
Gipson, Amos C., Gadsden (5)	1944 to 1951
Gibson, Edward Lec, Enterprise (3)	1940 to 1947
Godard, Claud G., Fairhope (2)	1942 to 1949
Golden, William C., Clanton (6)	1944 to 1951
Granger, F. G., Ashford (3)	†1942 to 1948
Gresham, Walter A., Russellville (7)	*1940 to 1947
Grote, Carl A., Huntsville (8)	*1944 to 1951
Hatchett, Wm. C., Huntsville (8)	†1943 to 1949
Hill, Robert C., York (6)	*1943 to 1950
Hill, R. Lee, Haleyville (7)	*1946 to 1953
Hodges, Rayford, Scottsboro (8)	*1942 to 1949
Howell, John V., Marion (6)	*1943 to 1950
Isbell, Arthur L., Albertville (5)	1940 to 1947
Jackson, Albert Chas., Jasper (7)	1940 to 1947
Jones, Carl T., Newville (3)	1941 to 1948
Jones, J. Paul, Camden (1)	1943 to 1950
Kennedy, Hughes, Jr., Birmingham (9)	1943 to 1950
Killian, Claud D., Ft. Payne (5)	1940 to 1947
Killingsworth, Noah W., Brundidge (2)	*1946 to 1953
King, Chas. O., Birmingham (9)†	*1945 to 1952
Leatherwood, Elbert F., Hayneville (2)	1944 to 1951
Lisenby, J. Otis, Atmore (2)	1943 to 1950
Martin, John A., Montgomery (2)	*1940 to 1947
McCaslan, W. Hill, Union Springs (3)	1940 to 1947
Meadows, James A., Birmingham (9)	1943 to 1950
Moore, C. W. C., Talladega (4)	*1944 to 1951
Moore, David S., Jr., Birmingham (9)	†1946 to 1952
Morgan, J. Orville, Gadsden (5)	*1946 to 1953
Morgan, J. Ralph, Birmingham (9)	1943 to 1950
Noland, Lloyd, Fairfield (9)	†1943 to 1949
Oswalt, G. G., Mobile (1)	†1943 to 1949
Owings, W. J. B., Brent (6)	1941 to 1948
Parker, Lorenzo D., Andalusia (2)	*1940 to 1947
Partlow, Rufus C., Tuscaloosa (6)	1943 to 1950
Perdue, James D., Mobile (1)	*1940 to 1947
Riggs, Frank W., Montgomery (2)	1943 to 1950
Riser, William H., Lafayette (5)	*1942 to 1949
Roan, Avery M., Decatur (8)	1941 to 1948
Salter, Wilbur M., Anniston (4)	*1941 to 1948
Scarborough, B. C., Albertville (5)	*1942 to 1949
Segrest, Grady O., Mobile (1)	1942 to 1949
Sewell, John Ferris, Wetumpka (4)	1940 to 1947
Sherrill, John D., Birmingham (9)	*1946 to 1953
Simpson, Harry M., Florence (8)	*1945 to 1952
Simpson, John W., Birmingham (9)	1942 to 1949
Skinner, Marcus, Selma (4)	*1946 to 1953
Smith, Gordon R., Ozark (3)	*1941 to 1948
Smith, Merle E., Parrish (7)	*1945 to 1952
Stabler, Lorenzo V., Greenville (2)	*1944 to 1951
Stallworth, William A., Frisco City (1)	*1944 to 1951
Tankersley, James, Prattville (4)	†1942 to 1948
Thacker, Vincent J., Dothan (3)	*1942 to 1949
Tillman, John S., Clio (3)	*1942 to 1949
Waters, Hinton W., Opp (2)	*1946 to 1953
Watson, Jerre, Anniston (4)	*1945 to 1952
Weil, Clarence K., Montgomery (2)	*1944 to 1951
Welch, Stewart, Birmingham (9)	*1941 to 1948
Weldon, Joseph M., Mobile (1)	*1942 to 1949
White, Alexander L., Thomasville (1)	†1942 to 1948
Whiteside, Maurice S., Cullman (7)	1941 to 1948
Wilson, Frank C., Birmingham (9)	1942 to 1949
Woodruff, Gerald G., Anniston (4)	1940 to 1947
Wright, David H., Berry (7)	†1946 to 1952
Total 95	

†Deceased.

COUNSELLORS-ELECT

Donald, Joseph M., Birmingham (9)	1946 to 1953
Givhan, Edgar G., Jr., Birmingham (9)	1946 to 1953
Samford, Millard W., Opelika (3)	1946 to 1953
White, Marvin S., Hamilton (7)	1946 to 1953
Wright, Rufus D., Sheffield (8)	1946 to 1953
Total 5	

THE ROLL OF THE COLLEGE OF COUNSELLORS BY CONGRESSIONAL DISTRICTS

On this roll the names of the Counsellors are given by Congressional Districts. It is intended to serve as a guide in the election of new Counsellors, with a view to the distribution of them in approximate proportion to the number of members in the several districts. It is not considered to be good policy, and it is not considered to be fair and right, to give a few large towns greatly more than their pro rata share of Counsellors. The calculations are based on the nearest whole number. On April 1, 1946, there were 1,528 members in the County Medical Societies. That would give one Counsellor to every 15 members. The membership set forth in the following is that of April 1.

FIRST DISTRICT

Names of Counsellors—W. T. Cocke, Marengo; W. J. Barber, Choctaw; A. L. White, Clarke; G. G. Oswalt, G. O. Segrest, J. M. Weldon, J. D. Perdue and J. Mac Bell, Mobile; W. A. Stallworth, Monroe; J. Paul Jones, Wilcox.

County	Members	Counsellors
Choctaw	7	1
Clarke	15	1
Marengo	11	1
Mobile	103	5
Monroe	8	1
Washington	3	0
Wilcox	10	1
	157	10

SECOND DISTRICT

Names of Counsellors—C. G. Godard, Baldwin; L. V. Stabler, Butler; W. R. Carter, Conecuh; L. D. Parker and H. W. Waters, Covington; J. O. Lisenby, Escambia; E. F. Leatherwood, Lowndes; J. L. Branch, F. W. Riggs, J. A. Martin, C. K. Weil, Douglas L. Cannon and B. F. Austin, Montgomery; and N. W. Killingsworth, Pike.

County	Members	Counsellors
Baldwin	12	1
Butler	14	1
Conecuh	8	1
Covington	19	2
Crenshaw	8	0
Escambia	12	1
Lowndes	4	1
Montgomery	98	6
Pike	14	1
	189	14

THIRD DISTRICT

Names of Counsellors—J. S. Tillman, Barbour; W. H. McCaslan, Bullock; E. L. Gibson, Coffee; G. R. Smith, Dale; E. T. Brunson, Geneva; C. T. Jones, Henry; V. J. Thacker and F. G. Granger, Houston; F. H. Boyd and M. W. Samford, Lee.

County	Members	Counsellors
Barbour	16	1
Bullock	6	1
Coffee	12	1
Dale	7	1
Geneva	13	1
Henry	9	1
Houston	28	2
Lee	21	2
Macon	8	0
Russell	3	0
	123	10

FOURTH DISTRICT

Names of Counsellors—James Tankersley, Autauga; W. M. Salter, Jerre Watson and G. G. Woodruff, Calhoun; J. F. Alison and Marcus Skinner, Dallas; J. F. Sewell, Elmore; and French Craddock and C. W. C. Moore, Talladega.

County	Members	Counsellors
Autauga	7	1
Calhoun	41	3
Clay	10	0
Coosa	2	0
Dallas	35	2
Elmore	12	1
St. Clair	12	0
Talladega	27	2
	146	9

FIFTH DISTRICT

Names of Counsellors—W. H. Riser, Chambers; C. D. Killian, DeKalb; A. C. Gipson and J. O. Morgan, Etowah; A. L. Isbell and B. C. Scarborough, Marshall; C. E. Ford, Randolph; and R. A. Foshee, Tallapoosa.

County	Members	Counsellors
Chambers	16	1
Cherokee	4	0
Cleburne	3	0
DeKalb	15	1
Etowah	63	2
Marshall	16	2
Randolph	10	1
Tallapoosa	15	1
	142	8

SIXTH DISTRICT

Names of Counsellors—W. J. B. Owings, Bibb; W. C. Golden, Chilton; T. J. Anderson, Hale; M. H. Eskew and J. V. Howell, Perry; C. T. Acker, Shelby; R. C. Hill, Sumter; and J. P. Collier, R. C. Partlow and C. E. Abbott, Tuscaloosa.

County	Members	Counsellors
Bibb	10	1
Chilton	12	1
Greene	8	0

Hale	6	1
Perry	8	2
Shelby	16	1
Sumter	14	1
Tuscaloosa	51	3
	125	10

SEVENTH DISTRICT

Names of Counsellors—E. T. Brown, Blount; R. B. Dodson, J. G. Daves and M. S. Whiteside, Cullman; D. H. Wright, Fayette; W. A. Gresham, Franklin; M. S. White, Marion; L. C. Davis, Pickens; A. C. Jackson and M. E. Smith, Walker; and R. Lee Hill, Winston.

County	Members	Counsellors
Blount	9	1
Cullman	19	3
Fayette	8	1
Franklin	14	1
Lamar	10	0
Marion	10	1
Pickens	10	1
Walker	25	2
Winston	6	1
	111	11

EIGHTH DISTRICT

Names of Counsellors—Rayford Hodges, Jackson; H. M. Simpson, Lauderdale; R. D. Wright, Colbert; J. O. Belue, Limestone; W. C. Hatchett and C. A. Grote, Madison; and E. M. Chenault, J. C. Bragg and A. M. Roan, Morgan.

County	Members	Counsellors
Colbert	16	1
Jackson	12	1
Lauderdale	24	1
Lawrence	7	0
Limestone	13	1
Madison	29	2
Morgan	25	3
	126	9

NINTH DISTRICT

Names of Counsellors—S. H. Welch, J. D. Sherrill, Lloyd Noland, J. R. Garber, D. S. Moore, Jr., C. O. King,* R. E. Cloud, C. N. Carraway, H. Earle Conwell, J. W. Simpson, F. C. Wilson, G. A. Denison, Hughes Kennedy, Jr., J. A. Meadows, Ralph Morgan, D. C. Donald, Joe M. Donald, E. G. Givhan, Jr., and H. W. Allgood.

County	Members	Counsellors
Jefferson	409	19

THE ROLL OF CORRESPONDENTS

"Distinguished members of the medical profession residing outside of the State, and Counsellors of the Association, who after not less than ten years of faithful service may have resigned their counsellorships, shall be eligible for election as Correspondents.

"Correspondents shall have the privilege of transmitting or presenting to the Association

such communications, or scientific essays, as they may deem proper."—*From the Constitution.*

Name and Address	Date of Election
Andrew J. Coley, Oklahoma City	1909
W. S. Thayer, Baltimore	1921
Lewellys F. Barker, Baltimore	1921
Rudolph Matas, New Orleans	1921
John B. Elliott, Jr., New Orleans	1921
Henry A. Christian, Boston	1921
H. A. Royster, Raleigh, N. C.	1926
Stewart Roberts, Atlanta	1927
G. Canby Robinson, Baltimore	1928
Louis B. Wilson, Rochester, Minn.	1930
A. Benson Cannon, New York	1932
J. Shelton Horsley, Richmond	1933
Russell L. Cecil, New York	1934
George H. Semken, New York	1935
Frank H. Lahey, Boston	1937
T. M. McMillan, Philadelphia	1938
George T. Pack, New York	1939
E. V. McCollum, Baltimore	1940
Harvey B. Stone, Baltimore	1942
Albert C. Furstenberg, Ann Arbor	1943
Tinsley R. Harrison, Dallas, Texas	1944
Alton Ochsner, New Orleans	1946

SCHEDULE OF THE ANNUAL SESSIONS

AND PRESIDENTS SINCE THE RE-
ORGANIZATION IN 1868

Place and President	Year
Selma—Albert Galatin Mabry	1868
Mobile—Albert Galatin Mabry	1869
Montgomery—Richard Frazer Michel	1870
Mobile—Francis Armstrong Ross	1871
Huntsville—Thomas Childress Osborne	1872
Tuscaloosa—George Ernest Kumpe	1873
Selma—George Augustus Ketchum	1874
Montgomery—Job Sobieski Weatherly	1875
Mobile—John Jefferson Dement	1876
Birmingham—Edward Davies McDaniel	1877
Eufaula—Peter Bryce	1878
Selma—Robert Dickens Webb	1879
Huntsville—Edmond Pendleton Gaines	1880
Montgomery—William Henry Anderson	1881
Mobile—John Brown Gaston	1882
Birmingham—Clifford Daniel Parke	1883
Selma—Mortimer Harvey Jordan	1884
Greenville—Benjamin Hogan Riggs	1885
Anniston—Francis Marion Peterson	1886
Tuscaloosa—Samuel Dibble Seelye	1887
Montgomery—Edward Henry Sholl	1888
Mobile—Milton Columbus Baldrige	1889
Birmingham—Charles Higgs Franklin	1890
Huntsville—William Henry Sanders	1891
Montgomery—Benjamin James Baldwin	1892
Selma—James Thomas Searcy	1893
Birmingham—Thaddeus Lindley Robertson	1894
Mobile—Richard Matthew Fletcher	1895
Montgomery—William Henry Johnston	1896
Selma—Barckley Wallace Toole	1897
Birmingham—Luther Leonidas Hill	1898
Mobile—Henry Altamont Moody	1899
Montgomery—John Clarke LeGrande	1900
Selma—Russell McWhorter Cunningham	1901
Birmingham—Edwin Lesley Marechal	1902
Talladega—Glenn Andrews	1903
Mobile—Matthew Bunyan Cameron	1904

*Deceased.

Place and President	Year
Montgomery—Capers Capehart Jones	1905
Birmingham—Eugene DuBose Bondurant	1906
Mobile—George Tighlman McWhorter	1907
Montgomery—Samuel Wallace Welch	1908
Birmingham—Benjamin Leon Wyman	1909
Mobile—Wooten Moore Wilkerson	1910
Montgomery—Wyatt Heflin Blake	1911
Birmingham—Lewis Coleman Morris	1912
Mobile—Harry Tutwiler Inge	1913
Montgomery—Robert S. Hill	1914
Birmingham—Benjamin Britt Simms	1915
Mobile—James Norment Baker	1916
Montgomery—Henry Green	1917
Birmingham—William Dempsey Partlow	1918
Mobile—Isaac LaFayette Watkins	1919
Anniston—James Somerville McLester	1920
Montgomery—Louis William Johnston	1921
Birmingham—Dyer F. Talley	1922
Mobile—Walter S. Britt	1923
Montgomery—W. W. Harper	1924
Birmingham—J. D. Heacock	1925
Mobile—C. A. Mohr	1926
Montgomery—A. L. Harlan	1927
Birmingham—John D. S. Davis	1928
Mobile—E. V. Caldwell	1929
Montgomery—L. E. Broughton	1930
Birmingham—W. G. Harrison	1931
Mobile—Toulmin Gaines	1932
Montgomery—Samuel Kirkpatrick	1933
Birmingham—James R. Garber	1934
Mobile—William M. Cunningham	1935
Montgomery—Charles A. Thigpen	1936
Birmingham—Lloyd Noland	1937
Mobile—E. S. Sledge	1938
Montgomery—Seale Harris, Sr.	1939
Birmingham—M. S. Davie	1940
Mobile—Samuel A. Gordon	1941
Montgomery—James M. Mason	1942
Birmingham—Harvey B. Searcy	1943
Montgomery—Fred W. Wilkerson	1944
Meeting Cancelled—Walter F. Scott	1945
Birmingham—Walter F. Scott	1946

SECRETARIES OF THE ASSOCIATION

1852-1854	George A. Ketchum
1854-1855	R. Miller
1869-1873	Jerome Cochran
1874-1878	B. H. Riggs
1879-1892	T. A. Means
1893-1897	J. R. Jordan
1897-1904	G. P. Waller
1904-1906	L. C. Morris
1906-1915	J. N. Baker
1915-1923	H. G. Perry
1923-1924	Douglas L. Cannon
1924-1930	B. B. Simms
1930-1940	Douglas L. Cannon

TREASURERS OF THE ASSOCIATION

1854-1855	W. P. Reese
1869-1898	W. C. Jackson
1898-1915	H. G. Perry
1915-1939	J. U. Ray

SECRETARY-TREASURERS OF THE ASSOCIATION

1940- Douglas L. Cannon

SCHEDULE OF JEROME COCHRAN
LECTURERS

- 1899—J. T. Searcy, Tuscaloosa—What Is Insanity?
 1900—Wm. Osler, Baltimore—Not present.
 1901—Wm. Osler, Baltimore—Not present.
 1902—Nathan Bozeman, New York—Declined.
 1903—George H. Price, Nashville—The History of Medicine.
 1904—W. S. Thayer, Baltimore—Cardiac and Vascular Complications of Typhoid Fever.
 1905—Robert Abbe, New York—The Problems of Surgery.
 1906—Joseph Collins, Boston—Arteriosclerosis.
 1907—Nicholas Senn, Chicago—Final Triumph of Scientific Medicine.
 1908—E. L. Marechal, Mobile—Absent.
 1909—Lewellys F. Barker, Baltimore—Clinical Methods of Cardiac Investigation.
 1910—Frank S. Meara, New York—Some Problems of Nutrition in Early Life.
 1911—Rudolph Matas, New Orleans—Inflammatory Tuberculosis.
 1912—Maurice H. Richardson, Boston—Elimination of Preventable Disasters from Surgery.
 1913—L. L. Hill, Montgomery—Surgical Complications and Sequelae of Typhoid Fever.
 1914—Frank Smithies, Chicago—Contributions of the Twentieth Century to the Better Understanding of Gastric Cancer.
 1915—John B. Elliott, Jr., New Orleans—Abscess of Liver.
 1916—Howard A. Kelly, Baltimore—Radium Therapy.
 1917—Wm. J. Mayo, Rochester—Importance of Septic Infection in the Three Great Plagues.
 1918—George E. Bushnell, Washington—The Army in Relation to the Tuberculosis Problem.
 1919—George W. Crile, Cleveland, Ohio—Abdominal Surgery in Civil and Military Hospitals.
 1920—Henry A. Christian, Boston—Bright's Disease With Special Reference to Its Treatment.
 1921—J. Whitridge Williams, Baltimore—A Critical Review of Twenty-One Years' Experience with Caesarean Section.
 1922—Chas. H. Mayo, Rochester, Minn.—The Thyroid and Its Diseases.
 1923—Jas. S. McLester, Birmingham—Nutrition in Its Newer Aspects.
 1924—James S. Stone, Boston—Abdominal Diagnoses in Children.
 1925—H. A. Royster, Raleigh—The Surgeon's Heritage and Outlook.
 1926—Stewart Roberts, Atlanta—The Heart Muscle.
 1927—G. Canby Robinson, Baltimore—The Mechanism of Heart Failure and Its Correction.
 1928—John B. Deaver, Philadelphia—Chronic Pancreatitis.
 1929—Louis B. Wilson, Rochester, Minn.—Some Suggestions for Improved Training of Medical Specialists.

1930—Walter E. Sistrunk, Dallas, Texas—The Part That Surgical Anesthesia Has Played in Medical Science.

1931—R. S. Cunningham, Nashville, Tenn.—Studies on the Pathology of Tuberculosis and Syphilis.

1932—A. Benson Cannon, New York—Practical Points on the Diagnosis and Treatment of the so-called Lymphoblastoma Group of Diseases.

1933—J. Shelton Horsley, Richmond—Cancer of the Stomach and Colon.

1934—Russell L. Cecil, New York—Present Trends in the Study of Rheumatic Fever and Rheumatoid Arthritis.

1935—George H. Semken, New York—A Consideration of Tumors of the Breast.

1936—William D. Partlow, Tuscaloosa—A Debt the World Owes Medical Science.

1937—Frank H. Lahey, Boston—Carcinoma of the Colon and Rectum.

1938—T. M. McMillan, Philadelphia—An Optimistic View of Some of the Problems of Heart Disease.

1939—George T. Pack, New York—Recent Advances in the Radiation Therapy of Cancer.

1940—E. V. McCollum, Baltimore—Some Contributions of Nutritional Research to Clinical Medicine.

1941—M. Y. Dabney, Birmingham—The Story of Breast Cancer.

1942—Harvey B. Stone, Baltimore—Biliary Diseases as Seen by a Surgeon.

1943—A. C. Furstenberg, Ann Arbor—Objectives in Medical Education.

1944—Tinsley R. Harrison, Dallas, Texas—The Value and Limitations of Laboratory Tests in the Practice of Medicine.

1945—Meeting Cancelled.

1946—Alton Ochsner, New Orleans—The Influence of Serendipity on Medicine.

OFFICERS OF THE ASSOCIATION

PRESIDENT

Carl A. Grote (1947) Huntsville

VICE-PRESIDENTS

W. Hill McCaslan (1947) Union Springs

B. W. McNease (1948) Fayette

J. Paul Jones (1949) Camden

J. O. Morgan (1950) Gadsden

SECRETARY-TREASURER

Douglas L. Cannon (1950) Montgomery

THE STATE BOARD OF CENSORS

E. V. Caldwell, Chm. (1950) Huntsville

M. S. Davie (1950) Dothan

T. B. Hubbard (1947) Montgomery

W. D. Partlow (1947) Tuscaloosa

French Craddock (1948) Sylacauga

John L. Branch (1948) Montgomery

Lloyd Noland (1949) Fairfield

J. D. Perdue (1949) Mobile

John W. Simpson (1947)[†] Birmingham

K. A. Mayer (1951) Lower Peach Tree

M. Y. Dabney (1951)* Birmingham

STATE HEALTH OFFICER

B. F. Austin (1947) Montgomery

DELEGATES AND ALTERNATES TO THE AMERICAN MEDICAL ASSOCIATION

Delegate—Lloyd Noland Fairfield

Alternate—E. D. Lineberry Birmingham

(Terms expire with the 1947 session of the American Medical Association)

Delegate—A. A. Walker Birmingham

Alternate—G. O. Segrest Mobile

(Terms expire with the 1948 session of the American Medical Association)

COMMITTEE ON PUBLIC RELATIONS

B. F. Austin, Chairman, Montgomery 1951

G. O. Segrest, Mobile 1947

J. R. Garber, Birmingham 1948

M. M. Duncan, Huntsville 1949

J. O. Morgan, Gadsden 1950

COMMITTEE ON MENTAL HYGIENE

Frank A. Kay, Chairman, Birmingham 1947

C. M. Rudolph, Birmingham 1948

E. S. Sledge, Mobile 1949

COMMITTEE ON MATERNAL AND INFANT WELFARE

A. E. Thomas, Chairman, Montgomery 1947

T. M. Boulware, Birmingham 1948

Hughes Kennedy, Jr., Birmingham 1949

COMMITTEE ON CANCER CONTROL

J. P. Chapman, Chairman, Selma 1949

K. F. Kesmodel, Birmingham 1947

F. H. Craddock, Sr., Sylacauga 1948

COMMITTEE ON PREVENTION OF BLINDNESS AND DEAFNESS

B. B. Warwick, Chairman, Talladega 1947

Lucien Brown, Gadsden 1948

W. B. Hardy, Birmingham 1949

COMMITTEE ON POSTGRADUATE STUDY

Ralph McBurney, Chairman, Birmingham 1948

G. O. Segrest, Mobile 1949

Cabot Lull, Birmingham 1947

COMMITTEE ON ACCIDENTS AND INDUSTRIAL HYGIENE

C. H. Ford, Chairman, Birmingham 1949

Marcus Skinner, Selma 1947

H. Earle Conwell, Birmingham 1945

COMMITTEE ON ARCHIVES AND HISTORY

M. Y. Dabney, Chairman, Birmingham 1949

S. A. Gordon, Marion 1947

Toulmin Gaines, Mobile 1948

E. B. Carmichael, Ph. D., Birmingham Associate

COMMITTEE ON PHYSICIAN-DRUGGIST RELATIONSHIPS

R. E. Cloud, Chairman, Ensley 1948

W. M. Salter, Anniston 1949

Seale Harris, Sr., Birmingham 1947

POSTWAR PLANNING COUNCIL

M. S. Davie, Chairman Dothan

C. A. Grote Huntsville

J. Banks Robertson Fayette

W. Hill McCaslan Union Springs

*Resigned April 26, 1946.

[†]Appointed by the President to succeed Dr. Dabney and to serve until the annual session in 1947.

J. Paul Jones
B. F. Austin
B. W. McNease

Camden J. O. Morgan
Montgomery Douglas L. Cannon
Fayette R. R. Kracke

Gadsden
Montgomery
Birmingham

REGISTRATION AT THE SEVENTY-EIGHTH ANNUAL SESSION, BIRMINGHAM, APRIL 16-18, 1946

LIFE COUNSELLORS

Alison, S. B., Minter
Ashcraft, V. L., Reform
Burdeshaw, S. L., Headland
Caldwell, E. V., Huntsville
Dabney, M. Y., Birmingham
Davie, M. S., Dothan
Dowling, J. D., Mentone
Gresham, G. L., Speigner
Harris, Seale, Birmingham
Hayes, C. P., Elba
Heacock, J. D., Birmingham
Hill, Robert L., Winfield
Hill, R. S., Montgomery

Howell, W. E., Haleyville
Hubbard, T. B., Montgomery
Leach, Sydney, Tuscaloosa
Lester, B. S., Birmingham
Lull, Cabot, Birmingham
Lupton, F. A., Birmingham
Martin, J. C., Cullman
Mason, J. M., Birmingham
Mayer, K. A., Lower Peach Tree
McAdory, E. D., Cullman
McLeod, J. C., Bay Minette
McLester, J. S., Birmingham
Partlow, W. D., Tuscaloosa

Ralls, A. W., Gadsden
Rucker, E. W., Birmingham
Scott, W. F., Birmingham
Searcy, H. B., Tuscaloosa
Shropshire, C. W., Birmingham
Speir, P. V., Greenville
Thigpen, C. A., Montgomery
Waldrop, R. W., Bessemer
Walker, A. A., Birmingham
Walls, J. J., Alexander City
Ward, H. S., Birmingham
Wilkinson, D. L., Birmingham

ACTIVE COUNSELLORS

Abbott, C. E., Tuscaloosa
Acker, C. T., Montevallo
Alison, J. F., Selma
Allgood, H. W., Fairfield
Anderson, T. J., Greensboro
Austin, B. F., Montgomery
Barber, W. J., Butler
Bell, J. Mac, Mobile
Belue, J. O., Athens
Boyd, F. H., Opelika
Bragg, J. C., Decatur
Brown, E. T., Cleveland
Cannon, D. L., Montgomery
Carraway, C. N., Birmingham
Carter, W. R., Repton
Chenault, E. M., Decatur
Cloud, R. E., Birmingham
Cocke, W. T., Demopolis
Collier, J. P., Tuscaloosa
Conwell, H. E., Birmingham
Craddock, F. H., Sylacauga
Daves, J. G., Cullman
Davis, L. C., Gordo
Denison, G. A., Birmingham
Donald, D. C., Birmingham
Eskew, M. H., Uniontown
Ford, C. E., Roanoke
Foshee, R. A., Alexander City

Garber, J. R., Birmingham
Gibson, E. L., Enterprise
Gipson, A. C., Gadsden
Godard, C. G., Fairhope
Granger, F. G., Ashford
Gresham, W. A., Russellville
Grote, C. A., Huntsville
Hatchett, W. C., Huntsville
Hill, R. C., York
Hill, R. Lee, Haleyville
Hodges, Rayford, Scottsboro
Isbell, A. L., Albertville
Jackson, A. C., Jasper
Jones, J. P., Camden
Kennedy, Hughes, Jr., Birmingham
Killian, C. D., Ft. Payne
Killingsworth, N. W., Brundidge
King, C. O., Birmingham
Martin, J. A., Montgomery
McCaslan, W. H., Union Springs
Meadows, J. A., Birmingham
Moore, C. W. C., Talladega
Morgan, J. O., Gadsden
Morgan, J. R., Birmingham
Noland, Lloyd, Fairfield
Oswalt, G. G., Mobile

Owings, W. J. B., Brent
Parker, L. D., Andalusia
Partlow, R. C., Tuscaloosa
Perdue, J. D., Mobile
Riggs, F. W., Montgomery
Riser, W. H., Lafayette
Roan, A. M., Decatur
Salter, W. M., Anniston
Scarborough, B. C., Albertville
Segrest, G. O., Mobile
Sherrill, J. D., Birmingham
Simpson, J. W., Birmingham
Skinner, Marcus, Selma
Smith, G. R., Ozark
Stabler, L. V., Greenville
Taylor, W. R., Town Creek
Thacker, V. J., Dothan
Tillman, J. S., Clio
Waters, H. W., Opp
Watson, Jerre, Anniston
Weil, C. K., Montgomery
Welch, S. H., Birmingham
Weldon, J. M., Mobile
Whiteside, M. S., Cullman
Wilson, F. C., Birmingham
Woodruff, G. G., Anniston
Wright, D. H., Berry

DELEGATES

Autauga: G. E. Newton, Prattville
Baldwin: W. C. Holmes, Foley;
H. C. Jordan, Fairhope
Barbour: G. O. Wallace, Clayton
Bibb: J. W. Crowder, West Blocton
Bullock: C. W. McDonald, Union Springs
Butler: H. H. Henderson, Greenville

Calhoun: M. S. Adams, Anniston
Chambers: H. S. Weldon, Lanett
Cherokee: W. J. Campbell, Center;
S. C. Tatum, Center
Chilton: C. O. Lawrence, Clanton;
J. W. Moore, Clanton
Clarke: W. S. Chapman, Jackson
Clay: J. S. Gay, Ashland
Cleburne: F. W. Wood, Heflin;
L. R. Wright, Heflin
Coffee: E. G. Bragg, Elba

Colbert: R. D. Wright, Sheffield
Covington: L. L. Parker, Andalusia
Cullman: R. M. Gross, Cullman
Dale: N. W. Holman, Ozark
Dallas: L. T. Lee, Selma
DeKalb: R. J. Guest, Jr., Ft. Payne
Elmore: C. S. Cotlin, Wetumpka;
E. G. Moore, Tallassee
Escambia: L. H. Clemmons,
Brewton; A. J. Treherne, Attmore

Etowah: C. L. Lawson, Gadsden
Fayette: B. W. McNease, Fayette; J. D. Scrivner, Berry
Franklin: Price Clayton, Russellville
Geneva: C. P. Gay, Geneva; J. R. Tippins, Hartford
Houston: R. D. Crawford, Dothan; W. H. Turner, Dothan
Jackson: E. L. Trammell, Dutton
Jefferson: E. G. Givhan, Birmingham; R. A. Hamrick, Fairfield; J. B. McLester, Birmingham; W. S. Littlejohn, Birmingham; J. M. Mason, III, Birmingham; W. H. Riser, Jr., Birmingham; E. B. Robinson, Jr., Birmingham
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SUMMARY OF ANNUAL ATTENDANCE

Year	Life Counsellors	Active Counsellors	Delegates	Members	Visitors	Total	Place
1915	32	74	108	429	49	692	Birmingham
1916	19	66	92	106	41	306	Mobile
1917	18	64	96	199	32	409	Montgomery
1918	27	63	80	257	44	471	Birmingham
1919	22	43	87	94	102	348	Mobile
1920	16	61	59	85	51	272	Anniston
1921	26	65	73	183	58	405	Montgomery
1922	26	72	76	314	68	556	Birmingham
1923	14	48	66	106	50	284	Mobile
1924	29	70	84	230	79	492	Montgomery
1925	27	78	97	328	113	643	Birmingham
1926	33	74	105	194	131	537	Mobile
1927	36	85	104	252	87	564	Montgomery
1928	33	77	108	507	106	831	Birmingham
1929	19	60	102	176	109	466	Mobile
1930	32	83	106	286	102	609	Montgomery

Year	Life Counsellors	Active Counsellors	Delegates	Members	Visitors	Total	Place
1931	26	80	116	410	158	790	Birmingham
1932	19	60	101	158	133	471	Mobile
1933	21	74	103	264	85	547	Montgomery
1934	26	75	97	404	53	655	Birmingham
1935	15	59	91	180	83	428	Mobile
1936	23	79	95	265	68	530	Montgomery
1937	25	80	96	396	81	678	Birmingham
1938	18	65	78	157	63	381	Mobile
1939	29	79	96	326	84	614	Montgomery
1940	29	77	105	401	229	841	Birmingham
1941	29	66	86	211	91	483	Mobile
1942	33	75	105	249	82	544	Montgomery
1943	31	71	83	321	127	633	Birmingham
1944	33	72	92	214	110	521	Montgomery
1945	Meeting Cancelled						
1946	38	81	87	330	127	663	Birmingham

AMERICAN MEDICAL ASSOCIATION NEWS

PRESENT STANDARD PENICILLIN TREATMENT METHOD FOR SYPHILIS**RESEARCH GROUP FINDS THAT COMMERCIAL PENICILLIN IS NOT SINGLE SUBSTANCE BUT MIXTURE OF SEVERAL**

Because of varied changes in penicillin potency, the Committee on Medical Research of the Office of Scientific Research and Development and the U. S. Public Health Service sponsored a nation-wide study and now offer a standardized method for the drug's use in the treatment of syphilis.

In a joint statement in the May 25 issue of The Journal of the American Medical Association, the two groups state that penicillin as it is commercially supplied is not a single substance but a mixture of several.

"At least four, and possibly other, fractions of penicillin have been identified, called in this country penicillins G, X, F and K. The relative quantities of each of these fractions present in commercial penicillin has varied much from time to time and to an unknown extent in the industry as a whole as between different manufacturers or even at different times from the same manufacturer."

Research has shown that the amount of penicillin K contained in commercial penicillin has an effect on the relative usefulness of the drug for syphilis treatment. Recently this fraction has been found in large amounts in the commercially produced drug. Its ineffectiveness is apparently due to the fact that, unlike penicillins G, X and F, it is rapidly destroyed in the body.

In conclusion the committee reports that the "changing character of commercial penicillin is reflected in the fact that the results of penicillin treatment of early syphilis have been less satisfactory since May 1944 than prior to that date (when the proportion of impurities was higher and the amount of penicillin K lower)."

Investigators have noted that the penicillin that was originally available had an approximate potency of 200 units per milligram which has gradually been increased by the elimination of impurities to the present level of 900-1,400 units per milligram. However, they have also noted that a 15 day treatment with 2,400,000 units of this penicillin gave less satisfactory results than the previous treatment with 1,200,000 units in seven and one-half days.

As a result of their study the authors of this report have made certain recommendations to assure adequate treatment of syphilis with penicillin. The article contains the following suggestions for the medical profession:

Around-the-clock injections should be given into the muscles every two to three hours for a minimum of seven and one-half days.

Patients with primary syphilis should receive not less than 3,600,000 units of penicillin while those with early secondary syphilis should receive not less than 5,400,000 units.

In case of relapse the patient should receive injections of mapharsen, arsenic or bismuth in addition to penicillin.

Under no circumstances should penicillin in its present available form be administered by mouth for the treatment of syphilis.

In treating neurosyphilis, penicillin can be advantageously combined with fever therapy.

The committee further reports that the syphilis treatment problem is receiving "intensive study in a number of cooperating institutions. The penicillin manufacturers are likewise aware of the situation, are cooperating in the study and are taking practical steps in production to correct the identifiable difficulties."

ALLERGY SENSITIVE PERSONS INCREASING IN NUMBER, DOCTOR SAYS

An Ohio physician says there is an alarming increase of persons subject to allergic sensitivities and places the responsibility for this increase on two factors: the intermarriage of allergic individuals and the rapid growth and distribution of substances causing allergy.

Karl D. Figley, M. D., of Toledo, Secretary of the American Academy of Allergy, writing in the current issue of *Hygeia*, health magazine of the American Medical Association, says:

"To our knowledge, heredity is the factor determining whether or not one is allergic. The allergic individual is born with the predisposition to become sensitive to substances he encounters in later life. He inherits or lacks something that gives him the so-called 'allergic constitution.'"

Pollens and various dusts cause allergic sensitiveness to develop. House dust is a common offender. The author blames the crowding of homes with overstuffed furniture and bedding for this condition. "Because of draperies and other 'dust catchers,' the dust problem is always present. Central heating plays an important role in distributing dusts effectively through the home also."

Asthma is one of the most troublesome and disabling of the allergic manifestations. Dr. Figley explains that "inhalation of dust particles into the smaller air passages of the lungs sets up an allergic inflammation in the delicate lining membrane. Swelling and congestion of the lining occurs, making it difficult for the sufferer to breathe and even more difficult to get rid of the waste air in his lungs. This results in the asthmatic type of breathing."

Many persons have annual symptoms such as sneezing spasms followed by profuse running of the nose which they attribute to sinus trouble. Often they are unable to breathe freely through the nose because the nasal membranes are swollen. In many instances house dust sensitivity is responsible for this combination of symptoms (allergic rhinitis).

In 1922 Dr. Robert A. Cooke of New York showed that house dust contains an allergen peculiar to itself. No one knows the exact nature of this dust allergen. It is thought that it represents a deterioration product of feathers, cotton and kapok, due to aging. Possibly mold action is a factor. Pillows and mattresses stored in damp cottages have a potent dust allergen, and of course molds thrive on dampness.

"The basic principle for the allergic," Dr. Figley states, "is to discover his particular allergen or allergens, and avoid contact with them. In the case of such an ever-present substance as house dust, this is not always easy. The individual is instructed to prepare a bedroom that is dust free. Walls must be cleaned, rugs and draperies removed, closets emptied of 'dust catchers,' and the pillows and mattresses encased with impervious covers."

Another helpful measure for the allergic is to raise his tolerance for dust inhalation by immunizing injections of dust extract.

YEAST DERIVATIVE EFFECTIVE AGAINST DEADLY SCRUB TYPHUS

NAVY DOCTOR TRIES DRUG ON 18 SEVERELY ILL PATIENTS AND FINDS IT LOWERS FEVER AND REDUCES MORTALITY

A compound isolated from yeast which is known as para-aminobenzoic acid has been successfully used to treat tsutsugamushi disease, or scrub typhus. According to an article appearing in the May 25 issue of The Journal of the American Medical Association, scrub typhus has been one of the severest diseases encountered by American troops in the Pacific and Asiatic theaters of war.

Liut. Nicholas A. Tierney (MC), U. S. N. R. and associates made a study of 34 severely ill patients admitted to the 20th General Hospital and the 94th Indian General Hospital, located at Ledo, Assam, India.

Tsutsugamushi is an acute disease which is transmitted by the bite of a parasite mite. The lymph nodes are enlarged, fever usually lasts from two to three weeks. About a week after the onset of the disease a rash appears.

Dr. Tierney treated 18 patients suffering from this disease with large doses of para-aminobenzoic acid while another group of 16 patients, who received the standard treatment, were observed for comparison.

The drug was given by mouth as a powder partly neutralized by a sodium bicarbonate solution, which has a tendency to lessen gastric irritation. The drug was usually continued until the patient's temperature remained normal for one week.

The author states: "The difference between the degree of overall severity in the patients who received para-aminobenzoic acid and those who did not was striking. The great majority of those receiving the drug had mild courses. There were no deaths, and only one patient became gravely ill. Of the patients who did not receive para-aminobenzoic acid three died and seven were gravely ill."

Dr. Tierney noted that after approximately two days of drug treatment the patient's temperature started to fall with the gradual abatement of the symptoms of the disease, and after five to seven days it was normal in the majority of cases, while in the comparison group there was an average of 10 more days of fever.

In conclusion, the author says: "The patients who were given para-aminobenzoic acid had fewer days of fever, less severe symptoms of complicating conditions, a shorter period of convalescence and a lower case fatality rate."

The author stresses the importance of early treatment of tsutsugamushi disease. "Treatment with para-aminobenzoic acid was instituted in these cases not later than the end of the seventh day of the disease. It is obvious that the earlier the treatment is begun the better, but it is not known just how late para-aminobenzoic acid may be started and still be effective. It should be worth trying even though it may be late in the case."

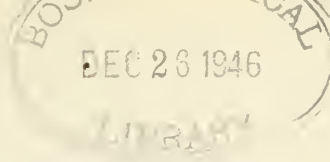
Dr. Tierney says that this drug appears to be widening the field of chemical treatment by attacking a new group of diseases for which there has been no cure such as typhus fever, Rocky Mountain spotted fever or tick fever and trench fever. These are all related diseases caused by tiny germs called Rickettsia.

VACCINATION HAS PROTECTIVE EFFECT AGAINST EPIDEMIC INFLUENZA

Three physicians report that vaccination with virus types A and B will exert a protective effect against epidemic influenza B.

Thomas Francis Jr., Jonas E. Salk and William M. Brace of Ann Arbor, Mich., present their study in the May 25 issue of The Journal of the American Medical Association. The investigators are from the Department of Epidemiology and Virus Laboratory, School of Public Health, and the Student Health Service, of the University of Michigan.

During an epidemic of influenza B in November and December 1945, the authors compared a group of approximately 600 army men, enrolled at the University of Michigan, who were injected with concentrated influenza A and B vaccine with another service unit which averaged about 1,100 men who were not vaccinated. Only 7, or 1.15 per cent, of the 600 men were admitted to the hospital for respiratory infection during the epidemic period in contrast to 109, or 9.91 per cent in the unvaccinated service unit.



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Volume 15

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JOURNAL SAYS 5,707 WERE ADDED TO U. S. PHYSICIAN RANKS IN 1945

DEATH REMOVES 3,815 DOCTORS, LEAVING AN APPROXIMATE INCREASE OF 1,892; MOST LICENSES ISSUED IN CALIFORNIA

There were 5,707 additions to the medical profession in 1945, according to data presented in the forty-fourth annual compilation of medical licensure and allied statistics by the Council on Medical Education and Hospitals of the American Medical Association and published in the May 11 issue of *The Journal of the American Medical Association*.

"The number of physicians removed by death in the United States and possessions in the same period was 3,815," *The Journal* says, adding: "It would appear therefore that the physician population in the United States last year increased by 1,892."

During 1945 there were 9,153 licenses to practice medicine and surgery issued by the medical examining boards of the 48 states, the District of Columbia, Alaska, Hawaii, Puerto Rico and the Virgin Islands. Of these licenses, 5,541 were issued after examination and 3,612 by reciprocity and endorsement of other state licenses or of the certificate of the National Board of Medical Examiners.

California, with 1,208, issued the greatest number of licenses during 1945. New York issued 799 and Pennsylvania 518.

Increases in the number of physicians registered last year as compared with data reported for 1944 were noticeable in a number of states and particularly in Arkansas, California, the District of Columbia, Florida, Illinois, Indiana, Iowa, New Jersey and the possessions, while more pronounced decreases in registration occurred in Georgia, Kansas, Kentucky, Maryland, Michigan, Mississippi, Missouri, Nebraska, Ohio, Pennsylvania and Virginia.

The greatest number of graduates of any one school examined was 228, representing Indiana University School of Medicine. Of this number, 213 were examined in Indiana and 15 in seven other states. Graduates of the University of Pennsylvania were examined in the greatest number of states—22.

Twenty-seven approved medical schools in the United States had no failures before medical licensing boards.

Altogether there were 5,929 candidates who appeared before medical examining boards in 1945, of whom 5,341 passed and 588, or 9.9 per cent, failed. The greatest percentage of failures represented two groups—foreign and unapproved schools.

Council Secretary Victor Johnson reported that the wartime accelerated medical program started about July 1, 1942 and the peak of graduates was reached in 1944, when two classes were graduated at most schools. The total number of graduates for the four session three year cycle to July 1, 1945 was 20,662. For the four years 1942 to 1945 inclusive 35,803 physicians received licenses. This figure includes physicians previously licensed who are migrating to other states and veteran medical officers not returning to their original state of practice.

Discontinuance of the A. S. T. and Navy V-12 programs in medical schools at the end of the session which for most schools ended in March 1946 permits schools to decelerate, and most if not all schools are planning to discontinue the accelerated program.

DOCTOR ESTIMATES THREE OUT OF FOUR PEOPLE HAVE ATHLETE'S FOOT

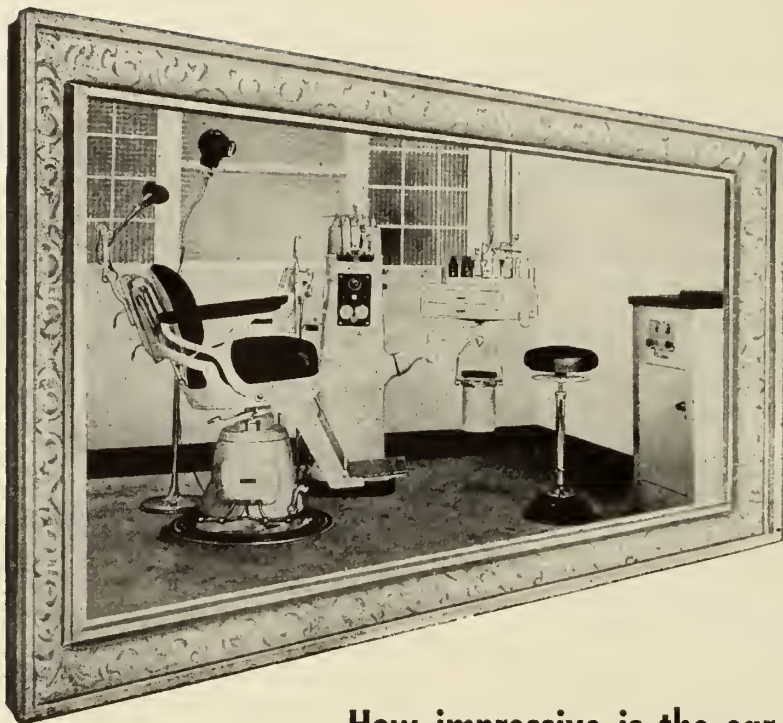
Dr. Jerome S. Peterson believes that three out of four persons have, or once had, athlete's foot, which is caused by tiny organisms called fungi.

The New York physician, writing in the current issue of *Hygeia*, the health magazine of the American Medical Association, says that these fungi follow the example of most germs and bacteria by liking heat and moisture. With the approach of summer, trouble begins for sufferers of athlete's foot. Dr. Peterson states:

"In a cold, dry place, the fungi wither away after a while, but when they are on feet which become overheated, and start perspiring, they flourish.

"The fungi usually are found in great hordes in public showers, gymnasiums and around the edges of swimming pools. Almost everyone has the fungi on his feet—yes, even people who have never had any symptom of athlete's foot.

"There are some cases where the infection isn't confined solely to the feet. The hands are the likely sites for this secondary infection, but occasionally the thighs and other parts of the body may be included."

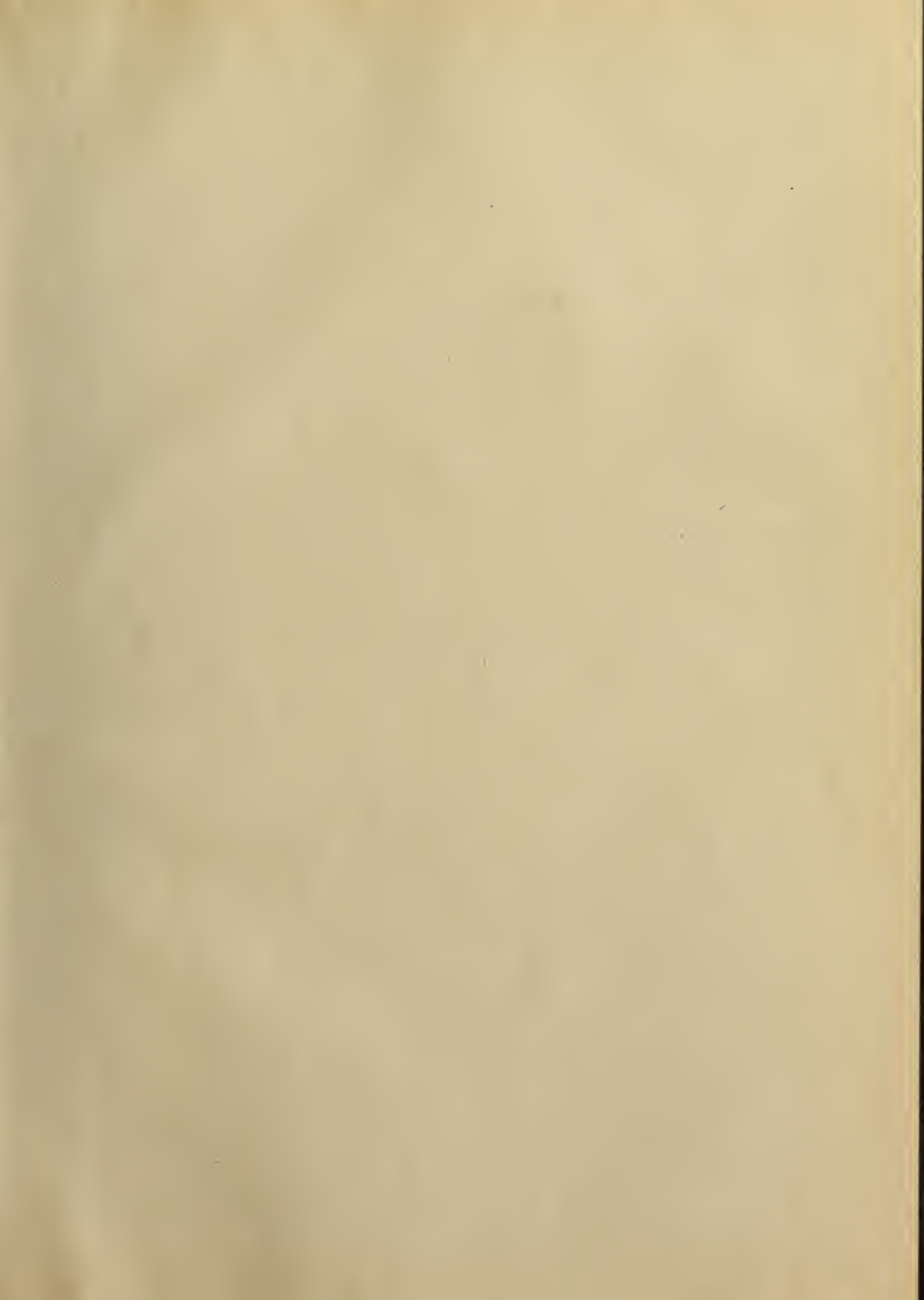


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